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FIELD COLUMBIAN MUSEUM

PUBLICATION 4.

Botanical Series. Vol. 1, No. 1.

CONTRIBUTION

TO THE

FLORA OF YUCATAN

BY

CHARLES FREDERICK MILLSPAUGH,

Curator, Department of Botany.

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CHICAGO, U. S. A.

August, 1895.

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FICUS RUBIGINOSA?

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Contribution to the Flora of Yucatan.

The peninsula of Yucatan forms the southeastern extremity of Mexico, and constitutes its two Confederate States of Yucatan in the east and Campeche in the west. It projects as a compact rectangular mass between the waters of the Gulf of Mexico on the north and those of the Caribbean Sea on the south, and is separated from the Island of Cuba on the east by the narrow channel of Yucatan, through which pours the current of the Gulf Stream, after being heated in the cauldron of the southern portion of the Gulf. The coast line of the peninsula, about 700 miles in extent, presents a uniform, monotonous aspect of an almost continuous line of low sand dunes, which enclose at nearly all points broad lagoons, ranging in depth of water according to the season. The peninsula has a mean breadth of about 200 miles, and a total area of 55,400 square miles, being about the size of the State of Illinois,

The entire eastern portion of the country is, geologically speaking, of recent formation, having been built up in shallow water by polypi, in the form of a low level plateau of porous limestone, having only sufficient soil caught in its uneven surface to support a dense but dwarfish vegetation.

From Cape Catoche, its most northeasterly projection, southward along the coast, extend the great Blanquilla reefs, among which are scattered many small islands of coralline rock and clear coral sand. The principal of these are Cankun, Holbox, Cantoy and Mugeres; all lie near the coast, and their formation is apparently too recent to create much soil except the sand of the disintegrated reef rock. About half way down the coast, and ten miles from it in the channel, there is, however, a larger and older island, Cozumel, which is doubtless a special formation, being considerably higher and older than any of the others. This island has a soil similar to, if not the same as, that of the mainland, and its vegetation is less of the sand-littoral than that of the others. Cozumel is about twenty-five miles long, its highest point being nearly one hundred feet above the sea. In speaking of the flora, Professor Hemsley says in the supplement to

Vol. IV, of Godman and Salvin's *Biologia Centrali-Americana*: "Taking the present data, the flora of Cozumel is probably more West Indian than continental American in character; for, although the number of species, excluding doubtful ones common to Cozumel and the Continent, but not found in the West Indies, is somewhat larger than the number of West Indian species found in Cozumel, but not on the mainland, those of the latter category are of a more distinct type than those of the former." This may prove true, yet an element enters into the collection upon which Professor Hemsley based his observation of which he had no knowledge; the collector, Dr. Gaumer, a resident of the mainland, collected on Cozumel only such species as he had not observed on the Peninsula.

This section of Mexico is, in the main, excessively dry, there being no elevations sufficiently high to intercept the moisture-bearing clouds from the Atlantic, while those from the Pacific are shut out by the Sierra Madre range; rainfall is deficient, especially in the northern and southern districts. The heat is also great here, and almost continuous through the year. A good idea of the climate is given in the following letter recently received from Dr. Gaumer: "March is one of our dryest months, quite hot but very healthy; many of the forest trees are then in bloom, though nearly leafless; for hunting wild animals and birds it is, however, the best month in the year. January and February are not so hot and have more flowers, while April and May are much hotter and the flowers are fewer still. In October, November and December, flowers are very abundant and the weather cool. June is by far the most delightful month of all the year; Nature, clad in the splendor of her fresh green attire, is everywhere bedecked with beautiful flowers, among which flit myriads of bright-hued butterflies and brilliant plumaged birds; rains are frequent, however, and form the only drawback to collecting. July, August and September are unsafe months for foreigners to visit this region, although there is no danger if they come in January and remain through this period."

Although the upper and main portion of Mexico has been for years a favorite collecting ground for botanists, Yucatan has, strangely enough, received but little attention, and so little is known of its flora that Drude in his *Handbuch der Pflanzengeographie*, says nothing whatever of the region, though the work was published in 1890. Grisebach, who is best equipped concerning the flora of the neighboring Gulf islands, simply states in his *Vegetation der Erde* (1884) that the conditions of the region prevent luxuriance of vegetable growth, and Hemsley in his report on the botany of Mexico and Central America prepared for the *Biologia* quoted above, indicates the paucity of

knowledge concerning the plant life of the peninsula in the following words: "We may add that little is known of the details of the botany of Yucatan, except that it is very poor and scanty, and largely composed of plants that still bear long droughts without injury. The poverty of the flora is ascribed to the fact that the copious rains rapidly filter away through the porous limestone substratum." All this renders the botany of the country of still greater interest, and its development of the greatest. It is, therefore, for this reason that the Museum has decided to put a collector at work in the field and accumulate full knowledge of its flora. In order, therefore, that our work may be as complete as possible, we have carefully compiled in this first contribution all that we could find published concerning previous collections.

The history of previous work toward a knowledge of this region is that of fragmentary collections, no collector having so far done any exhaustive collecting in the field.

In 1835, Jean Jules Linden, a Belgian horticulturist, gathered about twenty-five species of plants in Yucatan while on his way to Vera Cruz. This constitutes the first known collection from this part of Mexico.

In 1848, Hon. E. P. Johnson collected about seventy-five species, which he sent to Dr. Torrey with the label "Yucatan and Tabasco." Some doubt is therefore felt as to the purely Yucatan specimens in the gathering.

In 1885 and 1886, Dr. George F. Gaumer, while collecting in ornithology for the British Museum, gathered on the islands of the east coast, the inflorescence and a few leaves of by far the largest number of plants that have come out of the country, 224 species. These, together with the two collections mentioned above, were worked over by Prof. Hemsley for the *Biologia*, and comprise all that is known of the insular flora of Yucatan.

The collection which forms the basis of this contribution was made last January, during an expedition to the ruined city of Chichen Itza, and the Islands of Mugeres and Cozumel, and is again incomplete and fragmentary, on account of the excessive dryness of the season, and the rapidity of movement of the party. The expedition was generously planned and carried forward by Mr. Allison V. Armour of Chicago, and as it was conducted in his steam yacht it gave an opportunity of visiting the islands, that would otherwise have been unattainable.

In the following list, the species in black face type are those collected or observed by myself, the balance, in the body type, have been carefully compiled from the pages of the *Biologia Centrali-*

Americana, as previously noted. The arrangement of the natural orders is that of Engler and Prantl in *Die Naturlichen Pflanzenfamilien*, as far as published, otherwise that of Bentham and Hooker's *Genera Plantarum*. The nomenclature is in accordance with the "Rochester rules" as far as our reference facilities would permit.

The determination of the species was made by the author in the Herbarium of the Shaw Botanical Gardens at St. Louis, through the courtesy of the Director, Prof. Wm. Trelease, with the exception of a few which were kindly compared in the Gray Herbarium, Harvard, by Prof. B. L. Robinson, and the orders credited to specialists in the body of the list.

CHICAGO, August, 1895.

Plants of the Allison V. Armour Expedition.*

HEPATICAE.†

MASTIGOLEJEUNEA, Spruce.

M. auriculata, Wils.

On trunks of smooth trees. Chichen Itza, Jan. 17, 1895 (**106**).

CHEILOLEJEUNEA, Spruce.

C. ——— (Juvenile).

On bole of living tree. Mascab Pixoy, Jan. 22, 1895 (**151**).

C. ——— (Juvenile).

On trunk living Ceibo. Island of Cozumel, Jan. 5, 1895 (**37**).

EULEJEUNEA, Spruce.

E. lepida, L. & G.

On bark of living Ceibo. Island of Cozumel, Jan. 5, 1895 (**32**).

MUSCI.§

BARBULA, Hedw.

B. agraria, Hedw.

On dry limestone cobble, Cedral, Island of Cozumel, Jan. 5, 1895 (**48**). Associated with Didymodon æneus on dry limestone rock, Chal-tun-ha road, near Izamal, Jan. 1895 (**80** in part).

DIDYMODON, Hedw.

D. æneus, Sch.

Associated with Barbula agraria on dry limestone rock, Chal-tun-ha road, near Izamal, Jan. 14, 1895 (**80** in part) sterile.

STEREOPHYLLUM, Hedw.

S. leucostegum (Brid).

On limestone rock, Island of Cozumel, Jan. 5, 1895 (**33**). On dead and decaying limb, Lagoona Colombia, Island of Cozumel, Jan. 7, 1895 (**47**).

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* In black face type

†Specimens kindly determined by Professor L. M. Underwood, who also referred the two Cheilolejeunea to Professor Stephani.

§Kindly determined by M. Professor Jules Cardot.

PTERIDOPHYTA.*

POLYDPODIUM, Linn.

P. Phyllitidis, Linn.

On fallen trunk of dead tree, Cedral, Island of Cozumel, Jan. 5, 1895 **(38)**.

Specimens very large and fine.

P. lycopodioides, Linn.

Climbing living trees in dry open woods, Chichen Itza, Jan. 18, 1895 **(134)**.

The same fine large form collected by Mr. Pringle in upper Mexico.

ADIANTUM, Linn.

A. tricholepis, Fee.

Mouth of small cave, north aspect of the Cerro Grande, Izamal, Jan. 13, 1895 **(54)**. Crevices of north aspect ruin of the Monjas, Chichen Itza, Jan. 17, 1895 **(112)**.

Both are excellent specimens of this once rare, beautiful fern.

PTERIS, Linn.

P. acquilina caudata (Linn.), Hook.

Pteris caudata, Linn. Collected by Dr. Gaumer on the Island of Cozumel, 1885.

HEMITELIA, R. Brown.

H. Hartii, Baker.

Collected by Dr. Gaumer on the Island of Cozumel, 1885.

CHEILANTHES, Swartz.

C. leucopoda, Link.

Collected by Dr. Gaumer on the Island of Cozumel, 1885.

ASPLENIUM, Linn.

A. pumilum, Swartz.

On sandy loam under limestone ledge, Cedral, Island of Cozumel, Jan. 5, 1895 **(35)**.

Fronds taller than is usual, the upper portion more elongated than in the type, and deeply pinnatifid to the acuminated apex, with the lobes more or less deeply cut, but not laciniated. Quite unlike in appearance the smaller normally deltoid forms with entire, or nearly entire upper third, but otherwise the characters are the same. The species, however, like all other Aspleneæ, is an extremely variable one, and the present form is no greatly marked exception.

Smaller plants with firmer texture collected at the same station on the under side of a small projecting limestone ledge **(36)**.

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* Determinations and notes of my numbers kindly made by Mr. Geo. E. Davenport.

ASPIDIUM, Swartz.

A. trifoliatum, Swartz.

On the rocky walls of the Cenote de Cafetal, Chichen Itza, Jan. 18, 1895 (**132, 133**).

These two numbers embrace a series of forms from very small, young, and undeveloped plants upward, and prove especially interesting on this account.

ANEIMIA, Swartz.

A. adiantifolia, Swartz.

Mouth of small cave, north aspect of the Cerro Grande, Izamal, Jan. 13, 1895 (**58**).

CYCADACEAE.

DIOON, Lindl.

D. spinulosum, Dyer.

Progreso (C. *J. Hoege*).

PANDANACEAE.

PANDANUS, Linn. f.

P. utilis, L. f. **PAH.**

Margin of the Aguada of Xcholac, about two leagues south of Izamal.

P. Candelabrum, P. Beauv. **ƆIPIL.***

In the scrub between Progreso and the first railroad station south.

GRAMINEAE.

(*Maydeæ*).

COIX, Linn.

C. lachryma-Jobi, Linn. Job's Tears.

Collected in the Patio of the residence of Dr. Gaumer, Izamal, Jan. 13, 1895 (**73**).

(*Paniceæ*).

PANICUM, Linn.

P. sanguinale, Linn.

Collected by Dr. Gaumer on the Island of Cozumel, 1885.

P. Lindeni, Fourn.

Yucatan, type loc. ignot. (*Linden*).

CENCHRUS, Linn.

C. pallidus, Fourn.†

Crevices in rocks in the Patio of Dr. Gaumer, Izamal, Jan. 13, 1895 (**70**).

Note: Fourn. Mex. Pl. Gram. p. 50, = 465 Liebman from Santa Cruz.

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* The inverted letter C is pronounced in the Maya *tz*.

† Kindly determined by Professor F. Lamson Scribner.

C. brevisetus, Fourn.*

Sands of the beach at Progreso, especially near the cattle pens where many cattle are herded on arrival from Tampico and other ports on the Gulf Coast of Mexico. Jan. 26, 1895 (**204**).

Note: Fourn. Mex. Pl. Enum. Gram. p. 50. = 3140 Bourgeau from Orizaba, Mexico.

STENOTAPHRUM, Trin.

S. Americanum, Schrank.*

Grassy edge of the sandy beach west shore, Island of Cozumel, at the portage to Lagoona Colombia, Jan. 7, 1895 (**50**).

(*Chlorideæ*).

CHLORIS, Sw.

C. Petræa, Linn.

Collected on the Island of Holbox by Dr. Gaumer, 1886.

BOUTELOUA, Lagasca.

B. Triæna (Spreng), Scribner.*

Top of pyramid of El Castillo, Chichen Itza, Jan. 19, 1895 (**135**).

Note: Scribner Proc. Acad. Nat. Sci. Phila., 1891, p. 307. *Antheropogon Triæna,* Spreng, Syst. 1, p. 293, ex. Kunth; *Bouteloua triathera,* Bentham (in part).

ELEUSINE, Gærtn.

E. Indica, Gærtn.

Collected on the Islands of Holbox and Cozumel by Dr. Gaumer in 1885-6.

E. Ægyptiaca, Pers.

Collected on the Island of Holbox by Dr. Gaumer, 1886.

Festuceæ.

ERAGROSTIS, Host.

E. ciliaris, Link.

Collected on the Islands of Cozumel, Mugeres and Holbox by Dr. Gaumer, 1885-6.

CYPERACEAE.

CYPERUS, Linn.

C. Brunneus, Sw.

Islands of Mugeres and Cozumel (*Gaumer*, 1886).

C. aristatus, Rottb.

Yucatan, loc. ignot. (*Schott*).

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*Determined by Professor F. Lamson Scribner.

C. Ottonis, Boeckl.*
On the apex of the reef rocks, north end of the Island of Mugeres, Jan. 2, 1895 (**22**).

C. ligularis, Linn.
Island of Cozumel (*Gaumer*, 1885).

C. thrysiflorus, Jungh.
Island of Cozumel (*Gaumer*, 1885).

IRIA, Rich.

I, polymorpha (Boeckl.) O.K.
Fimbristylis polymorpha, Boeckl. Island of Holbox (*Gaumer*, 1886).

PALMAE.

THRINAX, Sw.

T. parviflora, Sw.
Throughout the Islands of Mugeres, Cankun and Cozumel. Island of Cozumel (*Gaumer*, 1885), "very abundant."

SABAL, Adans.

S. Mexicana, ? *Bayal.* **XAAN.**
The common palmetto of the Islands and the Main, growing often to a height of 80 feet. In woodlands everywhere.

S. ———— sp. (Hemsl.)
Island of Mugeres (*Gaumer*, 1886).

COCOS, Linn.

C. nucifera, Linn. *Coco.*
Islands of Contoy, Mugeres, Cancun and Cozumel, along the coast throughout, and as far inland as Izamal, though the tree does not thrive well at the latter place. The trees and fruits on Cozumel and Cancun are specially fine.

ARACEAE.

PHILODENDRON, Schott.

P. lacerum, (Jacq.) Schott?
Arum lacerum. Jacq. On the walls of the Cenote de Cafetal, Chichen Itza, in leaf only, Jan. 19, 1895.

BROMELIACEAE.

BROMELIA, Linn.

B. Pinguin, Linn. **CHOM**
Common along the bridle path from Mascab Pixoy to Chichen Itza, some specially fine specimens near Pisté.

Many specimens of Bromeliads and Orchids were seen on the trees of this region, but all were out of flower, and but few with old fruits, Jan. 17, 1895.

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*Determined by Professor N. L. Britton.

ANANAS, Adans.

A. sativus, Mill. *Pina.* Pineapple.
The Pineapple is cultivated extensively on the Island of Cozumel, where the fruit is said to be the best produced in Mexico.

ÆCHMEA, R. & P.

A. laxiflora, Benth.
Yucatan, loc. ignot. (*Schott*).

HECHTIA, Kl.

H. Schottii, Baker.
Type locality, on the Cerro de Maxeana (*Schott*).

TILLANDSIA, Linn.

T. filifolia, Ch. & Schl.
Yucatan, loc. ignot. (*Johnson*).

T. polystachya, Linn.
Yucatan, loc. ignot. (*Johnson, Schott*).

T. vestita, Ch. & Schl.
Yucatan, loc. ignot (*Johnson*).

T. ——— sp. (Hemsl.)
Island of Holbox (*Gaumer*, 1886).

LILIACEAE.

YUCCA, Linn.

Y. Yucatana, Engelm.
Type locality, Ruins of Nohpat (*Schott*).

DASYLIRION, Zucc.

D. pliabile, Baker.
Yucatan, type loc. ignot. (*Schott*).

SMILACEAE.

SMILAX, Linn.

S. Mexicana, Kth. ? var., (Hemsl).
Island of Cozumel (*Gaumer*, 1885).

AMARYLLIDACEAE.

AMARYLLIS, Linn.

A. equestris (Herb.) Ait.
Hippeastrum equestre, Herb. Island of Cozumel (*Gaumer*, 1885).
Yucatan loc. ignot. (*Johnson*).

DIOSCOREACEA.

DIOSCOREA, Linn.

D. spiculiflora, Hemsl.
Yucatan type, loc. ignot. (*Linden*).

D. densiflora, Hemsl.
Island of Cozumel (*Gaumer*, 1886).

IRIDACEAE.

TIGRIDIA, Ker.

T. violacea, Schiede & Schl.
Yucatan, loc. ignot. (*Linden*).

MUSACEAE.

MUSA, Linn.

M. sapientum, Linn. Banana, **SAC HAAS.**
Cultivated on the Island and throughout the Main.

M. paradisiaca, Linn. Plantain, **BOX HAAS.**
Cultivated at San Miguel and Colombia, Island of Cozumel; at Merida, Izamal and Tuncas.

CANNACEAE.

CANNA, Linn.

C. Indica, Linn.
Island of Cozumel (*Gaumer*, 1886).

COMMELYNACEAE.

COMMELINA, Linn.

C. erecta, Linn.
Island of Cozumel (*Gaumer*, 1885).

C. Virginica, Linn.
Islands of Mugeres and Cozumel (*Gaumer*, 1886).

CALLISIA, Linn.

C. repens, Linn.
Yucatan, loc. ignot. (*Schott*).

ORCHIDACEAE.

CATTLEYA, Lindl.

C. ——— sp.
Abundant on various trees from Mascab Pixoy to Chichen Itza. In fruit only, Jan. 17, 1895.

PIPERACEAE.

PIPER, Linn.

P. Yucatanense, C. DC.
Yucatan, type loc. ignot. (*Linden*).

CASUARINACEAE.

CASUARINA, Linn.

C. Equisetæfolia, Linn.

Cultivated in the Campo Santo of Dolores, Island of Mugeres; Streets of San Miguel, Island of Cozumel; Island of Cankun; and in Merida, Izamal, and Progreso, Jan. 26, 1895 (**204**), height 30 to 60 feet.

MORACEAE.

FICUS, Linn.

F. laurifolia, Lam. *Laurel de la India.*

Cultivated extensively as an ornamental shade tree. Introduced from Cuba. Fine examples at Oncaan, Ouan, and Bocoba.

F. rubiginosa, ? (Plate I, Frontispiece). *Copo. Alamo.*

This form, to which we make doubtful reference in the absence of satisfactory flowers and fruits, is the most common species throughout the route we traveled on the Peninsula. It is a large tree 25 to 45 feet high, greatly spreading and very umbrageous. For some unaccountable reason it is called the *Alamo* (Poplar) by the Spaniards. Its juice contains sufficient caoutchouc to form, when mixed with that of the Sapote, an excellent bird lime.

F. grandifolia, ? **AKUM.**

A large tree 30 to 50 feet high. Fine specimens noted at Chichen Itza.

ALICASTRUM, P. Br.

A. Brownei, O. K. *Ramon.* **OX.**

Brosimum Alicastrum, Sw. Cultivated for fodder throughout the region embraced, also on the Islands of Mugeres and Cozumel. Fine specimens at Merida, Izamal, and Chichen Itza. Grows from 50 to 80 feet high. Yucatan, loc. ignot. (*Linden*).

The foliage "Ramon," serves as the principal green fodder for horses and mules from June to March. The wood is white and compact, and is used in carpentry; the fruit when boiled is eaten either alone or mixed with honey or corn meal, and the milky juice is used as an anti-spasmodic in the difficult breathing of asthma.

URTICACEAE.

URERA, Gaud.

U. microcarpa, Wedd.

Yucatan, loc. ignot. (*Johnson*).

ARISTOLOCHIACEAE.

ARISTOLOCHIA.

A. grandiflora, Sw.
Aristolochia foetens, Lindl. Cultivated at Izamal by Dr. Geo. F. Gaumer, who brought it from the Honduran Island of Ruatan in 1886. In flower, Izamal, Jan. 13, 1895 (**68**).

POLYGONACEAE.

ANTIGONON, Endl.

A. leptopus, Hook & Arn. ?
Island of Cozumel (*Gaumer*, 1885), "sepala exteriora basi subcordata," Hemsl.

COCCOLOBA, Linn.

C. Uvifera (Linn.) Jacq. *Uba.*
Polygonum Uvifera, Linn. On the inland edge of the sandy beach, Islands of Cozumel and Mugeres Jan. 1, 1895. Also collected here by Dr. Gaumer, 1885.

C. Cozumelensis, Hemsl.
Type locality, Island of Cozumel (*Gaumer*, 1885).

CHENOPODIACEAE.

ATRIPLEX, Linn.

A. cristata, H. B. K.
Island of Holbox (*Gaumer*, 1886).

LERCHEA, Hall.

L. ——— Sp. (Hemsl.)
L. Suaeda, Forsk. Island of Holbox (*Gaumer*, 1886).

AMARANTHACEAE.

CELOSIA, Linn.

C. paniculatata, Linn.
C. nitida, Vahl. Island of Mugeres (*Gaumer*, 1886).

AMARANTHUS, Linn.

A. hybridus, Linn. **XTEZ.**
A. chlorostachys, Willd. About the ruins of the old church of the Hacienda, Chichen Itza, Jan. 1895 (**129**).
The Maya name Xtez is applied to all similar Amaranths.

ACHYRANTHES, Linn.

A. aspera, Linn. *Sorillo blanco.* **SAC-PICHÉ.**
Waste grounds around the old church of the Hacienda, Chichen Itza, Jan. 18, 1895 (**131**).

ALTERNANTHERA, Forsk.

A. straminea (Mart).
Megiphanes straminea, Mart. Island of Cozumel (*Gaumer*, 1885).

GOMPHRAENA, Linn.

G. capituliflora.
Campo about Izamal, Jan. 23, 1895 (**174**).

G. vermicularis, Linn.
Island of Holbox (*Gaumer*, 1886).

IRISINE, P. Br.

I. celosioides, Linn.
Island of Cozumel (*Gaumer*, 1885 and 1886). Yucatan loc. ignot. (*Johnson*).

I. luzuliflora, Griseb.
Plentiful on the north slope of the Cerro Grande, Izamal, Jan. 13, 1895 (**59**). On the ruins of the Monjas, Chichen Itza, Jan. 17, 1895. In our specimens the stem is ligneous and nearly erect.

PHYTOLACCACEAE.

RIVINA, Linn.

R. humilis, Linn.
Island of Cozumel (*Gaumer*, 1885).

R. humilis glabra, Linn.
Base of smaller mound, Izamal, Jan. 14, 1895 (**85**), in flower and young fruit. Growing in crevices of masonry, old Hacienda, Chichen Itza, Jan. 17, 1895 (**101**), in flower and ripe fruit. Among the rocks, South Point, Island of Mugeres, in flower and ripe fruit Jan. 2, 1895.

R. scandens (Linn.) Mill.
Rivinia humilis scandens, Linn. *Villamilla octandra*, Hook. Yucatan, loc. ignot. (*Johnson*).

R. lævis, Linn.
Islands of Mugeres and Cozumel (*Gaumer*, 1886).

PETIVERIA, Linn.

P. alliacea, Linn.
Yucatan, loc. ignot. (*Linden*, *Johnson*).

NYCTAGINACEAE.

MIRABILIS, Linn.

M. longifolia, Linn. **XPAK-UM-PAK.**
Frequent about the ruins of Chichen Itza, Jan. 18, 1895 (**121**).

BOERHAAVIA, Linn.

B. erecta, Linn.
Island of Cozumel (*Gaumer*, 1885 and 1886). Campo about Izamal, Jan. 23, 1895 (**184**).

B. hirsuta, Linn.
Campo about Izamal, Jan, 23, 1895 (**172**).

NYMPHACEAE.

CABOMBA, Aubl.

C. aquatica, Aubl.
Yucatan, loc. ignot. (*Linden*).

CASTALIA, Salisb.

C. ampla (DC.) Salisb. **LAB.**
Nymphæa ampla, DC. At the margin of the Aguada of Xcolak, near Izamal, Jan. 22, 1895 (**159**).

ANONACEAE.

ANONA, Linn.

A. squamosa, Linn. *Saramuyo.* Custard Apple. **ɔALMUY.**
Cultivated extensively in gardens in Merida and Izamal for its fruit.

A. Insularis, Hemsl.
Type locality, Island of Cozumel (*Gaumer*, 1885).

A. muricata, Linn. *Guanabano.*
Cultivated extensively on the Peninsula, Merida, Izamal.

RANUNCULACEAE.

CLEMATIS, Linn.

C. Caripensis, H. B. K.
Clematis Caracasana, DC. Yucatan loc. ignot. (*Johnson*).

C. dioica, Linn.
Edges of the scrub Izamal, Jan. 23, 1895 (**178**), in fruit only. Island of Cozumel (*Gaumer*, 1886).

C. Flammulastrum, Griseb.
Ruins of Uxmal (*Schott*).

LAURACEAE.

PERSEA, Gaertn.

P. gratissima, Gaertn. *Aguacate.* Alligator Pear. **ON.**
A small spreading tree, cultivated extensively for its fruit. Izamal. Merida, Tuncas, Chichen Itza.

NECTANDRA, Roland.

N. Willdenowiana, Nees.
Island of Cozumel (*Gaumer*, 1885), varietates, Hemsley.

CASSYTHA, Linn.

C. filiformis, Linn.
Cassytha Americana, Nees. Island of Holbox (*Gaumer*, 1886).

PAPAVERACEAE.

ARGEMONE, Linn.

A. Mexicana, Linn. *Cardosanto.*
About the huts and streets of Cedral, Island of Cozumel Jan. 5, 1895, (**34**); also collected here by Dr. Gaumer in 1885–6. A garden weed in Merida and Izamal.

CRUCIFERAE.

CAKILE, Gaertn.

C. æqualis, L'Her.
Cakile maritima, Rich. Island of Mugeres, on the sands of the beach together with *Tournefortia gnaphalodes* forming the first verdure back from the sea. North Point and near the Campo Santo of Dolores, Jan. 1, 1895 (**13**), also collected here by Dr. Gaumer in 1885. Progreso, in the same situation and association, Jan. 26, 1895.
A form of this species, Island of Cozumel (*Gaumer*, 1885).

CAPPARIDACEAE.

CAPPARIS, Linn.

C. amygdalina, Lam.
Yucatan, loc. ignot. (*Linden*).

CRATAEVA, Linn.

C. Tapia, Linn.
Tree 20 to 25 feet; woodlands about Izamal, Jan. 23, 1895 (**187**).

CRASSULACEAE.

BRYOPHYLLUM, Salisb.

B. pinnatum (Lam.) S. Kurz.
Cotyledon pinnatum, Lam. *Bryophyllum calycinum*, Salisb. Plentiful on the north aspect of the Cerro Grande, Izamal, Jan. 13, 1895 (**62**). A dense growth of this species masses the ground about the east margin of the Cenote of Ix-Kil, Chichen Itza. Island of Cozumel (*Gaumer*, 1885).

ROSACEAE.

CHRYSOBALANUS, Linn.

C. Icaco, Linn.
Island of Mugeres (*Gaumer*, 1886).

LEGUMINOSAE.

PITHECOLOBIUM, Mart.

P. ligustrinum, Kl.
Yucatan, loc. ignot. (*Johnson*).

P. sericifolium, Benth. ?
Island of Cozumel (*Gaumer*, 1885), "Vine 10 to 50 feet; common."

P. oblongum, Benth.
Island of Mugeres (*Gaumer*, 1886).

P. Unguis-Cati (Linn.) Benth.
Island of Mugeres (*Gaumer*, 1886). Along the Tepakaam road, near Izamal, Jan. 15, 1895 (**92**).

CALLIANDRA, Benth.

C. Portoricensis (Jacq.) Benth.
Yucatan, loc. ignot. (*Johnson*).

LYSILOMA, Benth. ?

L.——— sp. nov. Hemsl.
Island of Cozumel (*Gaumer*, 1885). Tree 25 to 100 feet; abundant, fruit wanting. Aff. *L. Schiedeanae*, Hemsley.

ACACIA, Linn.

A. cornigera (Linn.) Willd. ?
Mimosa cornigera, Linn. Very abundant in the scrub lands of the Island of Cozumel, and from Progreso to Chichen Itza.

A. Farnesiana (Linn.) Willd. ?
Mimosa Farnesiana, Linn. Island of Cozumel (*Gaumer*, 1885 and 1886). "Not common."

A. spadicigera, Ch. & Schl.
Island of Cozumel (*Gaumer*, 1885). "Abundant." Dr. Gaumer tells me that the Cozumelian plant is the same as that of the Main, and that his plants from there differ in no way from my No. **221** from Izamal. This removes the question mark from the species in Biol. Centr. Am., Vol. 4, p. 99.

LEUCAENA, Benth.

L. glauca (Linn.) Benth.
Mimosa glauca, Linn. Campo about Izamal, Jan. 23, 1895 (**182**).

MIMOSA, Linn.

M. trijuga, Benth.
Yucatan, loc. ignot. (*Johnson*).

DESMANTHUS, Willd.

D. depressus, Humb. & Bonpl.
Island of Cozumel (*Gaumer*, 1886).

TAMARINDUS, Linn.

T. Indica, Linn.
Cultivated at Cedral, Island of Cozumel.

BAUHINIA, Linn.

B. divaricata, Linn. *Pata de Vaca.*
Bauhinia porrecta, Sw. Scrub about Izamal, Jan. 22, 1895 (**216**). Yucatan, loc. ignot. (*Johnson*). Island of Cozumel (*Gaumer*, 1885 and 1886).
The Spanish name "*Pata de Vaca*" is applied to all of the Bauhinias having bilobed leaves.

B. latifolia, Cav.
Scrub about Izamal, Jan. 22, 1895 (**217**).

B. Lamarckiana, DC.
Borders of the more open woods, Mascab Pixoy, Jan. 22, 1895 (**144**).

CASSIA, Linn.

C. biflora, Linn.
Izamal, Jan. 23, 1895 (**186**), Bushy, 4 ft. high.

C. alata, Linn.
Island of Cozumel (*Gaumer*, 1885), "Rare."

C. emarginata, Linn.
Island of Cozumel (*Gaumer*, 1885), "very abundant."

C. ——— sp. **YAXHABIN.**
Tree 10 to 20 feet; abundant in the scrub-land from Progreso to Merida along the railroad. Flowers bright yellow, the most striking feature of the flora of January.

C. bacillaris, Linn. f.
Yucatan, loc. ignot. (*Johnson*).

C. bicapsularis, Linn.
Yucatan, loc. ignot. (*Johnson*).

C. reticulata, Willd.
Yucatan, loc. ignot. (*Johnson*).

C. occidentalis, Linn.
Lagoona Colombia, Island of Cozumel; Izamal, and Chichen Itza, Jan. 1895. Island of Mugeres (*Gaumer*, 1886).

C. ——— sp. (Hemsl).
Islands of Cozumel and Mugeres (*Gaumer*, 1886).

HAEMATOXYLON, Linn.

H. Campechianum, Linn.
Yucatan, loc. ignot. (*Johnson*).

CAESALPINIA, Linn.

C. Bonducella (Linn). Flem.
Guilandina Bonducella, Linn. A mass of this species on the skirts of the woods, South Point, Island of Mugeres, in fruit only Jan. 2, 1895.

C. pulcherrima (Linn). Sw.
Poinciana pulcherrima, Linn. Island of Cozumel (*Gaumer*, 1885), "very abundant."

C. exostemma, DC.
In the scrub along the road to Chal-tun-ha near Izamal, Jan. 13, 1895 (**75**).

ATELEIA, Moc. & Sess.

A. pterocarpa (DC.)
Edge of woods, road to Cedral, Island of Cozumel, Jan. 5, 1895 (**44**).

A. microcarpa (Pers).
Pterocarpus microcarpus, Pers. Scrub about Izamal, Jan. 23, 1895 (**177**).

SOPHORA, Linn.

S. tomentosa, Linn.
Island of Mugeres (*Gaumer*, 1886).

CROTALARIA, Linn.

C. pumila, Orteg.
Island of Mugeres (*Gaumer*, 1886).

INDIGOFERA, Linn.

I. Anil, Linn.
Island of Cozumel (*Gaumer*, 1886).

I. mucronata, Spreng.
Island of Cozumel (*Gaumer*, 1886).

PAROSELA, Cav.

P. Domingensis (DC).
Dalea Domingensis, DC. In the scrub bordering the road to Chal-tun-ha, near Izamal, Jan. 13, 1895 (**77**).

CRACCA, Linn.

C. cinerea (Linn), O.K.
Galega cinerea, Linn. *Tephrosia cinerea*, Pers. Yucatan, loc. ignot. (*Linden*). Island of Cozumel (*Gaumer*, 1885).

C. Caribæa, Benth.?
Island of Cozumel (*Gaumer*, 1885)

C. ——— sp. (Hemsl.)
Island of Cozumel (*Gaumer*, 1885), "a fragment only."

GLIRICIDIA, H.B.K.

G. ——— sp. nov. Hemsl.
Island of Cozumel (*Gaumer*, 1885). "Tree 50 feet; not abundant. In the absence of the fruit the genus of this tree cannot be satisfactorily determined." Hemsley.

G. maculata, H.B.K.
Island of Cozumel (*Gaumer*, 1886).

DIPHYSA, Jacq.

D. ——— sp. nov.? Hemsl.
Island of Cozumel (*Gaumer*, 1885), "Specimen insufficient for satisfactory determination. It may be: *D. Sennoidei* var. nov.? Hemsley."

AESCHYNOMENE, Linn.

A. Americana, Linn.
Yucatan, loc. ignot. (*Linden*).

MEIBOMIA, Adans.

M. affinis (Schl.) O.K.
Desmodium affine, Schl. Yucatan, loc. ignot. (*Johnson*).

M. adsendens (Sw.) O.K.
Hedysarum adsendens, Sw. Island of Cozumel (*Gaumer*, 1885).

AMERIMNON, P. Br.

A. Campechianum (Benth) O.K.
Dalbergia Campechiana, Benth. Yucatan, loc. ignot. (*Linden, Johnson.*)

LONCHOCARPUS, H.B.K.

L. violaceus, H.B.K.?
Island of Cozumel (*Gaumer*, 1885). "Tree 20 to 60 feet; very abundant."

ICHTHYOMETHIA, P. Br.

I. Piscipula (Linn.) O.K.
Erythrina Piscipula, Linn., *Piscidia Erythrina*, Linn. Island of Cozumel (*Gaumer*, 1885), "very common."

BRADBURYA, Raf

B. Virginiana (Linn.) O.K.
Clitoria Virginiana, Linn., *Centrosema Virginianum*, Benth.
Island of Cozumel (*Gaumer*, 1885).

B. pubescens (Benth.) O.K.
Centrosema pubescens, Benth. Yucatan, loc. ignot. (*Johnson*).

ERYTHRINA, Linn.

E. carnea, Ait.
Frequent in the scrub about Izamal, Jan. 14, 1895 (**94**).

CALOPOGONIUM, Desv.

C. caeruleum, Desv.
Yucatan, loc. ignot. (*Johnson*).

GALACTIA, P. Br.

G. ——— sp. (Hemsl.)
Island of Cozumel (*Gaumer*, 1886).

RHYNCHOSIA, Lour.

R. minima (Linn.) DC.
Dolichos minima, Linn. Island of Mugeres (*Gaumer*, 1886).

PHASEOLUS, Linn.

P. lunatus, Linn.
Island of Cozumel (*Gaumer*, 1886).

P. vulgaris, Linn. *Frijol.* **BUUL.**
Island of Cozumel (*Gaumer*, 1886).

P. Truxillensis, H.B.K.
Yucatan, loc. ignot. (*Johnson*).

DOLICHOS, Linn.

D. puriens, Linn. **CHIICAN.**
In the thicket, base of the smaller mound, Izamal, Jan. 14, 1895, in fruit only.

MALPIGHIACEAE.

HIRAEA, Jacq.

H. Barclayana, Benth. ?
Island of Cozumel (*Gaumer*, 1885).

HETEROPTERYS, Kth.

H. floribunda, H.B.K.
Yucatan, loc. ignot. (*Johnson*).

H. Lindeniana, A. Juss.
Yucatan, typ. loc. ignot. (*Linden*).

H. longifolia, H.B.K.
Yucatan, loc. ignot. (*Johnson*).

MALPIGHIA, Linn.

M. undulata, Juss.
Island of Cozumel (*Gaumer*, 1886).

BUNCHOSIA, Rich.

B. Lindeniana, A. Juss.
Yucatan, loc. ignot. (*Johnson*).

BYRSONIMA, Rich.

B. Karwinskiana, A. Juss.
Yucatan, loc. ignot. (*Johnson*).

B. crassifolia, H.B.K., var. (Hemsl.)
B. Cumingiana, A. Juss. Island of Cozumel (*Gaumer*, 1885).
"Not common."

ZYGOPHYLLACEAE.

TRIBULUS, Linn.

T. terrestris cistoides (Linn.) Oliver. *Abrojo.* **CHANXNUC.**
Tribulus cistoides, Linn. Streets of Progreso, May, 1887, Jan. 26, 1895 (**200**).

T. maximus, Linn.
Island of Cozumel (*Gaumer*, 1885).

RUTACEAE.

RUTACEARUM, Hemsl.

R. ———— Gen. et. sp. nov. Hemsl.
Island of Mugeres (*Gaumer*, 1886). "This may prove the type of a new genus; but without fruit it is impossible to be sure on this point." Hemsley.

ZANTHOXYLUM, Linn.

Z. pterota, Linn.
Island of Cozumel (*Gaumer*, 1885). "Not common.'

ENSENBECKIA, Kth

E. pentaphylla (Macf.) Griseb.
Island of Mugeres (*Gaumer*, 1886).

PTELEA, Linn.

P. pentandra, DC.

A low tree in the shrubbery of the north side of the smaller mound at Izamal, Jan. 14, 1895 (**86**). Immature.

CHALCAS, Linn.

C. exotica (Linn).

Murraya exotica, Linn. Introduced on the Island of Cozume (*Gaumer,* 1885).

CITRUS, Linn.

C. aurantium, L. *Naranja.* Orange.

Cultivated throughout the mainland, and on the Island of Cozumel. The first planting of the orange in Mexico was doubtless that of Bernal Diaz, who, while attached to the army of Cortez, sowed seed near the present location of Vera Cruz, and transplanted the resulting trees after the conquest. Several of these trees were again transplanted to Merida by Montejo, early in the 16th century.

C. vulgaris, Risso. *Cajera.* Bitter Orange. **SUTZ-PAKAL.**

Cultivated at San Miguel, Island of Cozumel, and on the mainland. Notwithstanding its bitter acid taste it is a very refreshing fruit, and is much prized by the natives.

C. Limonum, Risso. *Limon.* Lemon.

Cultivated at Progreso, Merida and Izamal, not so extensively however as the next species.

C. Limetta, Risso. *Limoncillo.* Lime.

Cultivated throughout the mainland, and on the Island of Cozumel; met with as far south as Mascab Pixoy.

SIMARUBACEAE.

SURIANA, Linn.

S. maritima, Linn.

North Point, Island of Mugeres, Jan. 2, 1895 (**23**). A shrub 5 to 10 feet high, bark thin, grayish-white, heart wood red, very hard. A prominent feature of the littoral growth.

Islands of Holbox and Mugeres (*Gaumer,* 1886).

PICRAMNIA, Sw.

P. Antidesma, Sw.

Island of Cozumel (*Gaumer,* 1885).

BURSERACEAE.

BURSERA, Linn.

B. Simaruba (Linn.) Sarg. **CHACAH.**

Bursera gummifera, Jacq. Abundant on the Islands of Mugeres and especially Cozumel, also between Tuncas and Chichen Itza on the Main, where its peculiar coppery trunk and divaricate branches render it a conspicuous object in the forest. It grows from 25 to 50 feet. Not yet in leaf Jan. 1-22, 1895.

MELIACEAE.

MELIA, Linn.

M. Azederach, Linn.
Introduced on the Island of Cozumel (*Gaumer*, 1885).

TRICHILIA, P. Br.

T. Terminalis, Jacq.
Island of Cozumel (*Gaumer*, 1885). "Not common."

CEDRELA, P. Br.

C. odorata, Linn. **KUCHÉ. KULCHÉ.**
The *Cedro* or "Cedar" of Mexico. Common in the interior at Chichen Itza. Often growing from 20 to 40 feet high.

C. Glaziovii, C. DC.
In the interior forests (*Linden*).

POLYGALACEAE.

POLYGALA, Linn.

P. paniculata, Linn.
Yucatan, loc. ignot. (*Johnson*).

EUPHORBIACEAE.

PHYLLANTHUS, Linn.

P. acuminatus, Vahl.
Yucatan, loc. ignot. (*Linden*).

P. ——— sp. (Hemsl.)
Island of Cozumel (*Gaumer*, 1885). "May be a variety of *P. nutans*." Hemsley.

P. Niruri, Linn.
Island of Cozumel (*Gaumer*, 1886).

CROTON, Linn.

C. maritimus, Walt.
Trailing extensively in the clear sands of the beach at Progreso, Jan. 26, 1895 (**201**). Island of Holbox (*Gaumer*, 1886).

C. ——— sp. (Hemsl).
Island of Cozumel (*Gaumer*, 1885). "May be a variety of *C. astroites*." Hemsley.

C. Zalapensis, H.B.K.
Along the Tuncas road, near Mascab Pixoy, Jan. 22, 1895 (**150**).

ACALYPHA, Linn.

A. setosa, A. Rich.
A low form. Campo about Izamal, Jan. 23, 1895 (**180**).

A. alopocuroides, Jacq.
Island of Cozumel (*Gaumer*, 1886).

RICINUS, Linn.

R. communis, Linn. Higuerilla. Castor Bean. **XOX.**
Very common about dwellings and in waste grounds where it has apparently escaped. Noted at all points on our route on the Peninsula. Fine large plants at Ouan, Jan. 24, 1895 (**194**), Merida, April 14, 1887. Islands of Mugeres and Cozumel.

JATROPHA, Linn.

J. aconitifolia, Mill. *Picar.*
Frequent throughout the dry scrub about Izamal, Jan. 13, 1895 (**66**). On the Island of Cozumel, and at all points on the Peninsula, between Progreso and Chichen Itza.
The Spanish name *Picar*, as applied to this plant, is more a word of warning than a name.

EUPHORBIA, Linn.

(*Anisophyllum-Hypericifoliæ*).

E. pilulifera, Linn.
One small specimen only, collected on the summit of the Monjas, Chichen Itza, Jan. 17, 1895 (**219**). Collected by Dr. Gaumer on the Island of Cozumel, 1885.

E. hypericifolia, Linn.
The common West Indian form, Merida, Jan. 24, 1895 (**197-9**). Streets of San Miguel and Cedral, Island of Cozumel, Jan. 5, 1895. Also collected on Cozumel by Dr. Gaumer, 1885 and 1886.

(*Anisophyllum-Chamaesyceæ*).

E. ——— sp.
An interesting erect or prostrate form, near E. serrula and doubtless new; the specimens too young for determination.
Grassy edge of sands of West beach, Island of Cozumel at the portage to the Lagoon of Colombia, Jan. 7, 1895 (**49, 53**).

E. ovalifolia, Engelm.
A form with less turbinate involucres having no hairs in the throat, otherwise agreeing with the species as described.
Sandy roadside, Dolores, Island of Mugeres, Jan. 1, 1895 (**19**).

E. maculata, Linn.
A very pubescent form, without the usual maculate leaves common on the south point of Mugeres Island, and on the lower courses of "The Watch Tower" ruin, Jan. 2, 1895 (**24**).

E. adenoptera, Bertol.

Fine specimens with large rose-colored appendages on the dryest limestone ledges of the campo, Chichen Itza, Jan. 17, 1895 (**107**).

(*Anisophyllum-Sclerophyllæ*).

E. buxifolia, Lam.

Great tufts of this species form the only break in the wide sandy beach of the east shores of the Island of Cancun. Very common, Jan. 3, 1895 (**31**). Plants 15 to 18 cm. high. Grassy sands of the west shore Island of Cozumel, Jan. 7, 1895 (**52**). Plants 5 to 10 dm. high and very shrubby. Sands of shore at Progreso, Jan. 26, 1895 (**202**). Sandy streets village of Dolores, Island of Mugeres, Jan. 2, 1895 (**20**).

This species was also collected on Mugeres and Holbox Islands by Dr. Gaumer in 1886.

(*Adenopetalum-Cyttarospermum*).

E. Armourii. sp. nov. (Plate II.)

Caule erecto glabro, ramis tenuibus frutescentibus (?), ramulis axillaribus solitariis folio longioribus, partes junioribus et nervos foliorum minute hirtula, foliis longe petiolatis e basi cuneata ellipticis integris acutis anguste lanceolatis, involucris in axilis super. terminalibusque longiuscule pedicillatis breviter turbinatis, lobis truncatis profunde 4-dentatis, glandulis 5 planis transverse ovatis, appendice alba bipartita laciniis oblongo-linearibus obtusis glandula duplo longioribus, stylis profunde bipartitis, capsula glabra, seminibus ovatis ad margines puncto-fevearum prominente tuberculatis. Folia 14-24 mm. lon., 10-19 mm. lat., caules 2½-4 dm. lon., 1-2 mm. diam., invol. 2 mm. lon., 1 mm. lat., semin. 1 mm. lon. ¾ mm. lat.

Growing in the crevices of the masonry forming one of the temples of the sacred Itzae, Chichen Itza, Jan. 17, 1895 (**108**).

Named in honor of Mr. Allison V. Armour, the projector of the expedition on which this collection was made.

E. astroites heterappendiculata, var. nov.

Caule tenui *flacciduli* alternatim ramosissimo, ramis glanduloso-hirtis pluries et divaricatim dichotomis, foliis oppositis minimis *longe petiolatis* orbiculatis vel transverse latioribus adpressiuscule hirtis, stipulis obsoletis, involucris terminalibus pedicillatis valde glanduloso-hirtis, *lobis truncatis 4-dentatis*, glandulis transverse ovatis concavis, *appendice integris 1–4 dentatis, dentato-2-3 partitis vel 4-partitis, laciniis lineari-lanceolatis obtusis*, capsula hirta, stylis profunde bipartitts, seminibus ovatis ad margine puncto-fovearum prominente tuberculatis.

Caules 2–3 dm. lon., ramis 8–12 cm. lon., foliis inferioris 6 mm. lat., invol. 1 mm. lon., semin. 1 mm. lon. ¾ mm. lat. The species, *E. astroites*, F & M., was collected at Tampocoala, Mexico, by Karwinsky.

Crevices of rocks, east slope of the Cerro Grande, Izamal, Jan. 13, 1895 (**64**).

EUPHORBIA ARMOURII, sp. nov.

(*Adenopetalum-Alectoroctonum*).

E. petiolaris, Sins.
Collected on the Island of Cozumel by Dr. Gaumer in 1886.

(*Poinsettia*).

E. heterophylla, Linn. **HOBONKAK**
The usual form of the species. The Maya name "Hobonkak" signifies "Fire in the hollow" referring to the orange-red bases of the floral leaves.
Island of Mugeres, Jan. 1, 1895; Island of Cozumel, Jan. 5, 1895; Chichen Itza, Jan. 17, 1895 (**111**); Progreso, Jan. 26, 1895. Collected on Cozumel by Dr. Gaumer in 1885.

(*Tithymalus-Ipecacuanhæ*)

E. trichotoma, Kunth.
Collected on the Island of Cozumel by Dr. Gaumer in 1885.

MALVACEAE.

ABUTILON, Gaertn.

A. Indicum (Linn.) Don. **SAC-XIEU.**
Sida Indica, Linn. Frequent on the campo about the ruins, Chichen Itza, Jan. 18, 1895 (**124**).

MALVEOPSIS, Presl.

M. spicata (Linn.) O.K. **CHÉ-CHÉ-BÉ.**
Malva spicata, Linn. *Malvastrum spicatum*, Griseb. Campo about the ruins, Chichen Itza, Jan. 18, 1895 (**124**).
The Maya name Che-che-be, signifying "The Home of the Garrapata," is commonly applied to all malvaceæ resembling this species.

SIDA, Linn.

S. acuta carpinifolia (Linn. f.) K. Schum.
Island of Cozumel (*Gaumer*, 1885).

ANODA, Cav.

A. hastata (Willd.) Cav. *Amapolite.*
Sida hastata, Willd. About the ruins of the old church of the Hacienda, Chichen Itza, Jan, 18, 1895 (**126**).

A. acerifolia (Zucc.) DC.
Sida acerifolia, Zucc. About the base of the smaller mound, Izamal, Jan. 14, 1895 (**83**).

MALVAVISCUS, Adans.

M. sepium, Schl.
Yucatan, loc. ignot. (*Johnson*).

M. ——— sp. (Hemsl.)
Island of Cozumel (*Gaumer*, 1886). "Near *M. pilosus*, DC." Hemsley.

M. arboreus, Cav. forma.
A common shrub about Izamal. On the Cerro Grande, Jan. 13, 1895, (**60**). Fruits of this species were collected afterwards at Silam by Dr. Gaumer (April, 1895).

M. concinnus, H.B.K.
Roadside and edges of open woods. Cedral, Island of Cozumel, Jan. 5, 1895 (**42**).

HIBISCUS, Linn.

M. tubiflorus, DC. **HOL.**
Shrub 4 to 6 feet; widely branching. Road from Mascab Pixoy to Xuku, in flower and fruit Jan. 22, 1895 (**157**).

BOMBACACEAE.

BOMBAX, Linn.

B. Ceiba, Linn. *Ceiba*, **YAXCHÉ.**
One of the largest trees noted on the trip, 80 to 100 feet. Fine specimens in and about Izamal, and between Xcolak and Tuncas, also at Chichen Itza.

CAROLINEA, Linn.

C. alba (Aubl.) Lodd. **XCUYCHÉ. KUYCHÉ.**
The beautiful *Amapola blanca*, cultivated extensively about Izamal and Merida. Not yet in bloom Jan. 21, 1895.

C. fastuosa, (D.C.) Sesse. *Amapola colorado.*
Cultivated with the last. A few of the magnificent rose-colored flowers expanded Jan. 21, 1895.

C. macrocarpa (Aubl.) Ch. & Schl.
Pachira macrocarpa, Aubl. Yucatan, loc. ignot. (*Johnson*).

CEIBA, Medic.

C. pentandra, (Linn.) Gaertn. *Pochoie*, **PEEM.**
Bombax pentandrum, Linn. *Bombax Ceiba*, Lun. (non Linn.) *Eriodendron anfractuosum*, D.C. Plentiful throughout the Peninsula. Fine specimens both to the north and south of Izamal, also at Mascab Pixoy.

STERCULIACEAE.

MELOCHIA, Linn.

M. pyramidata, Linn.
Island of Cozumel (*Gaumer*, 1885).

M. tomentosa, Linn. ?
Island of Cozumel (*Gaumer*, 1885). "This may be a distinct species; it is the same as Berlandier's 3032 from the Texano-Mexican region, and there is also a specimen in the Kew Herbarium, collected by Coulter, from Sonora Alta." Hemsley.

WALTHERIA, Linn.

W. Americana, Linn.
Island of Cozumel ? (*Gaumer*, 1886). In a small clearing on the Tuncas road near Mascab Pixoy, Jan. 22, 1895 (**152**). Along the railroad at Acalchen, Jan. 24, 1895 (**192**).

AYENIA, Linn.

A. magna, Linn.
Yucatan, loc. ignot. (*Linden*).

THEOBROMA, Linn.

T. Cacao, Linn. *Cacao.*
A small tree, cultivated in favored localities for its fruit, the chocolate-nut. Chichen Itza, in the Cenote de Cafetal.

GUAZUMA, Plum.

G. tomentosa, H.B.K. **PIXOY.**
On the road to Cedral, Island of Cozumel, in fruit, Jan. 5, 1895 (**40**). At Mascab Pixoy, Luché Pixoy, and Chichen Itza, Island of Cozumel (*Gaumer*, 1885). Yucatan, loc. ignot. (*Johnson*).

STERCULIA, Linn.

S. Carthagensis, Cav.
Yucatan, loc. ignot. (*Johnson*).

GUTTIFERAE.

MAMMEA, Linn.

M. Americana, Linn.
Island of Cozumel (*Gaumer*, 1885). "Rare."

BIXACEAE.

MAXMILIANEA, Mart. & Schr.

M. hibiscoides (Humb. & Bonpl.) **CHUM.**
Cochlospermum hibiscoides, Humb. & Bonpl. A tree 30 to 40 feet high, with a thick bark and very soft wood. The bark is used in the manufacture of "Cubos"; a sort of bucket. At Xuku, Jan. 22, 1895 (**156**). In flower, not in leaf.

MYROXYLON, Forst.

M. nitidum (Schl.)
Hisingera nitida and *pubescens*, Schl. *Xylosma nitidum*. A. Gray. Yucatan, loc. ignot. (*Johnson*).

BIXIA, Linn.

B. Orellana, Linn. *Arnatto.* **URUCU.**
Cultivated for its seed, the aril of which yields the "Butter Color" of Commerce. Merida, Izamal, in fruit along the road to Chal-tun-ha, Jan. 14, 1895 (**81**).

VIOLACEAE.

CALYPTRION, Ging.

C. Hybanthus (Aubl.)
Viola Hybanthus Aubl. *Corynostylis Hybanthus* (Aubl.) Mart. & Zucc., *Calyptrion Aubletii* (E. Mey.) Ging. Yucatan, loc. ignot. (*Johnson*).

ANACARDIACEAE.

RHUS, Linn.

R. Metopium, Linn.
Island of Cozumel (*Gaumer*, 1885). "Rare."

SPONDIAS, Linn.

S. lutea, Linn. *Abal.* **XKININ-HOBÓ.**
Cultivated on the Island of Cozumel and throughout the Peninsula. Yucatan, loc. ignot. (*Johnson*). The fruit is known as the *Ciruela* or Yucatan Plum.

S. ——— sp. (Hemsl.)
Island of Cozumel (*Gaumer*, 1885). "Only male flowers and quite young leaves." (Hemsley).

MANGIFERA, Linn.

M. Indica, Linn. *Mango.*
Island of Cozumel (*Gaumer*, 1886).

CELASTRACEAE.

CASSINE, Linn.

C. ——— sp. (Hemsl.)
Elaeodendron sp. Hemsl. Island of Mugeres (*Gaumer*, 1886).

CROSSOPETALUM, P. Br.

C. pallens (Smith).
Myginda pallens, Smith. Island of Cozumel (*Gaumer*, 1885). "Very rare."

HIPPOCRATEACEAE.

HIPPOCRATEA, Linn.

H. tenella, Miers. ?

Island of Cozumel (*Gaumer*, 1885). "This may be specifically different from the Mexican plant, but the material is insufficient to settle the question." Hemsley.

SAPINDACEAE.

SERIANA, Schum.

S. Mexicana (Linn.) Willd.

Paulinia Mexicana, Linn., *Serjania Mexicana*, Willd. Yucatan, loc. ignot. (*Johnson*).

S. plicata (Radlk).

Yucatan, loc. ignot. (*Johnson*).

S. scatans (Radlk).

Yucatan, loc. ignot. (*Johnson*).

SCHMIDELIA, Linn.

S. comina, Sw. ?

Yucatan, loc. ignot. (*Linden*).

PAULINIA, Linn.

P. curassavica, Linn.

Island of Cozumel (*Gaumer*, 1886).

SAPINDUS, Linn.

S. ——— sp.

At the Lagoona Colombia, Island of Cozumel, Jan. 7, 1895, in fruit only. Also collected here by Dr. Gaumer in 1886.

ALVARADOA, Liebm.

A. amorphoides, Liebm. **BEL-CINICHÉ.**

In the scrub bordering the Chal-tun-ha road, near Izamal, Jan. 13, 1895 (**76**).

RHAMNACEAE.

GOUANIA, Jacq.

G. stipularis, DC.

In the interior forests (*Linden*); type locality?

VITACEAE.

VITIS, Linn.

V. sicyoides monstrosa, Baker.

Yucatan, loc. ignot. (*Johnson*).

V. tiliaefolia, Willd.

Island of Cozumel (*Gaumer*, 1885).

TILIACEAE.

TRIUMFETTA, Linn.

T. althaeoides, Lam.
Yucatan, loc. ignot. (*Johnson*)

CORCHORUS, Linn.

C. siliquosus, Linn.
Yucatan, loc. ignot. (*Johnson*).

PASSIFLORACEAE.

PASSIFLORA, Linn.

P. Andersonii, DC. ?
Island of Cozumel (*Gaumer*, 1885) "Vine 30 to 50 feet; very abundant."

P. foetida, Linn.
Island of Cozumel (*Gaumer*, 1885), Island of Mugeres (*Gaumer*, 1886).

CARICACEAE.

CARICA, Linn.

C. Papaya, Linn. (Plate III.) *Papaya los Pajaros*. **CHICH PUT.**
Frequent on the islands of Mugeres, Cankun, and Cozumel, in fruit, very few specimens in flower. Chichen Itza, Jan. 20, 1895 (**143**). Island of Cozumel (*Gaumer*, 1886).
This is the native and natural form, called *Papaya los Pajaros* or "Bird Papaya" by the Spaniards, and Chich Put or "Little Papaya" by the Mayas. The fruit of this form is small, about one inch in diameter, nearly globular and not edible.

C. Papaya, Linn. (Cultivated) (Plate IV.) *Papaya*. **PUT.**
Commonly cultivated throughout the Peninsula, and on the Island of Cozumel, producing large pear-shaped fruit from 12 to 16 inches long and 6 to 9 inches in diameter at the larger end. The pulp is of an orange-salmon color, rich, juicy and delicious. Izamal, Jan. 13, 1895 (**69**).
The flavor of the fruit here, is said to be largely dependent upon the quantity of seed in the individual, those having but few seeds being far finer in every feature than those having many. It is also said that in raising Papayas from the seed in this locality selection plays no part, as the result can not be known until the plant bears its fruit; some of the seeds will revert to the original of the species (*Papaya los Pajaros*) while others will produce excellent Papayas.

CARICA PAPAYA, Linn.
(*Natural.*)

CARICA PAPAYA, Linn.
(*Cultivated.*)

JACARATIA, Marcgr.

J. Mexicana, DC. *Bonete,* **KUMCHÉ.**

A large tree 15 to 40 feet high, abundant between Merida and Izamal. A few individuals in flower at Izamal, Jan. 15, 1895 (**96.**)

The somewhat triangular fruit, called Bonete, has a yellow mawkish pulp, which is usually eaten in a sort of custard.

LOASACEAE.

GRONOVIA, Linn.

G. scandens, Linn. **LAL-MUCH.**

Extensively trailing over the campo about the ruins of Chichen Itza, Jan. 18, 1895 (**128**).

CACTACEAE.

CEREUS, Haw.

C. flagelliformis (Linn.) Mill. **CANCHOH.**

Island of Mugeres on the south-western coast rocks. Between Tuncas and Mascab Pixoy, and at Chichen Itza.

C. grandiflorus (Linn.) Haw. *Pitaya.*

Plentiful on the Islands of Mugeres and Cozumel. Between Tuncas and Chichen Itza.

C. ——— sp. (Hemsley).

On trees, Island of Cozumel (*Gaumer*, 1885). An *C. nycticalus* or *C. MacDonaldiæ*? Hemsley.

OPUNTIA, Adans.

O. Tuna (Linn.) Mill. *Tuna, Nopal.* **PAKAN.**

Cactus Opuntia, Linn. A large patch on the south point of the Island of Mugeres, bearing the largest and finest fruits that I have ever seen. In fruit Jan. 2, 1895. Frequent on the mainland, especially between Progreso and Merida.

LYTHRACEAE.

LAWSONIA, Linn.

L. alba, Lam.

Yucatan loc. ignot. (*Johnson*). Island of Cozumel (*Gaumer*, 1885). Of this species Hemsley says: "Introduced from the Old World."

RHIZOPHORACEAE.

RHIZOPHORA, Linn.

R. Mangle, Linn. **TAPCHÉ.**

Plentiful about the Lagoona Colombia, Island of Cozumel, where it forms many small "islands." Plentiful at the northwest end of the Island of Cankun, about which are also many "islands" composed entirely of this species. Island of Holbox (*Gaumer*, 1886).

MYRTACEAE.

PSIDIUM, Linn.

P. Guajava, Linn. *Guayabo*, **PICHI.**
Island of Cozumel (*Gaumer*, 1885). Cultivated at Merida, Izamal, and Tuncas.

PIMENTA, Lindl.

P. vulgaris, Wight.
Myrtus Pimenta, Linn. Beautiful large specimens in cultivation in the Cenote de Cafetal, Chichen Itza.

EUGENIA, Linn.

E. ——— sp. nov.? Hemsl.
Island of Cozumel (*Gaumer*, 1885). "Quite different from anything in the Kew Herbarium." Hemsley.

COMBRETACEAE.

BUCERAS, P. Br.

B. Catappa (Linn.) Hitch.
Terminalia Catappa, Linn. Island of Cozumel (*Gaumer*, 1885).

CONOCARPUS, Linn.

C. erecta, Linn.
Island of Cozumel (*Gaumer*, 1885). Island of Holbox (*Gaumer*, 1886).

MELASTOMACEAE.

TIBOUCHINA, Aubl.

T. longifolia (Vahl.)
Rhexia longifolia, Vahl. *Pleroma longifolia*, Hemsl. Yucatan loc. ignot. (*Johnson*).

CONOSTEGIA, G. Don.

C. Xalapensis (Bonpl.) G. Don.
Melastoma Xalapensis, Bonpl. Yucatan, loc. ignot. (*Johnson*).

CLIDEMIA, G. Don.

C. petiolaris, Schl.
Yucatan, loc. ignot. (*Johnson*).

MYRSINACEAE.

JACQUINIA, Linn.

J. Caracasana, H.B.K.
Island of Cozumel (*Gaumer*, 1885).

J. aristata, Jacq.
Island of Cozumel (*Gaumer*, 1885). Island of Holbox (*Gaumer*, 1886).

PARATHESIS, Hook f.

P. crenulata, Hook f.
Yucatan, loc. ignot. (*Johnson*).

PLUMBAGINEAE.

PLUMBAGO, Linn.

P. scandens, Linn.
Base of smaller mound, Izamal, Jan. 14, 1895 (**84**).

SAPOTACEAE.

ACHRAS, Linn.

A. Sapota, Linn. *Sapote.* **TAUCH. YA.**
Widely cultivated for its delicious fruit, which also yield, on puncture, the finest of the Yucatan Gum or "*Chicle.*" Also natural to many parts of the Peninsula, particularly in the eastern section where it is abundant and often reaches a growth of 50 to 100 feet in height.
Merida, Izamal, Yucatan loc. ignot. (*Linden*).

BUMELIA, Sw.

B. retusa, Sw. var? (Hemsl.)
Island of Cozumel (*Gaumer*, 1885). Island of Mugeres (*Gaumer*, 1886).

LUCUMA, Molina.

L. mammosa, Gaertn. **CHACHAL HAAS.**
A large and beautiful tree, cultivated for its fine fruit the *Mamey Colorado.* The large seed has a powerful amygdalous odor.
Izamal, Merida, Tuncas, Chichen Itza.

GENTIANACEAE.

EUSTOMA, Don.

E. exaltatum (Linn). Griseb.
Gentiana exaltata, Linn. Island of Cozumel (*Gaumer*, 1885). Island of Holbox (*Gaumer*, 1886).

APOCYNACEAE.

VALLESIA, R. & Pav.

V. glabra, Cav.
Island of Mugeres (*Gaumer*, 1886).

RAUWOLFIA, Linn.

R. heterophylla, Roem & Sch.
Yucatan loc. ignot. (*Johnson*).

THEVETIA, Linn.

T. nitida, A. DC.
Yucatan loc. ignot. (*Johnson*).

T. neriifolia, Juss.
Island of Cozumel (*Gaumer*, 1885 and 1886).

T. Gaumeri, Hemsl.
Type locality, Island of Cozumel (*Gaumer*, 1885), "Tree 40 to 60 feet high; not common."

PLUMERIA, Linn.

P. alba, Linn. **SABACNICTÉ.**
Suburbs of Merida, frequent May, 1887.

TABERNAEMONTANA, Linn.

T. amygdalifolia, Jacq. **UƆUPEK.**
Along the road to Valladolid beyond Tuncas. Not in flower, Jan. 17, 1895.

T. Acapulcensis, Miers.
Island of Cozumel (*Gaumer*, 1885).

ASCLEPIADACEAE.

PHILIBERTIA, H. B. K.

P. Lindeniana (Decne). Hemsl.
Sarcostemma Lindenianum, Decne. Yucatan type loc. ignot. (*Linden*).

MACROSCEPIS, H. B. K.

M. rotata, Decne.
Yucatan, type loc. ignot. (*Linden*).

ASCLEPIAS, Linn.

A. curassavica, Linn. **CUCHILXIU.**
Along the railroad, at the station of Ouan, Jan. 24, 1895 (**195**), fruits only. Island of Cozumel (*Gaumer*, 1885).

A. pratensis, Benth.
Along the railroad, at the station of Acalchen, Jan. 24, 1895 (**193**). Differs from the description in having roughly pubescent leaves, especially on the veins above and beneath.

METASTELMA, R. Br.

M. parviflorum (Sw.) R. Br.
Cynanchum parviflorum, Sw. Islands of Mugeres and Holbox (*Gaumer*, 1886).

ENSLENIA, Nutt.

E. racemosa (Jacq)
Cynanchum racemosum, Jacq. *Roulinia Jacquini*, Decne. Yucatan, loc. ignot. (*Linden*).

MARSDENIA, R. Br.

M. maculata, Hook.
Island of Cozumel (*Gaumer*, 1885).

CONVOLVULACEAE.

EVOLVULUS, Linn.

E. nummularius (Linn.) Linn.
Yucatan, loc. ignot. (*Johnson*).

IPOMOEA, Linn.

I. Pes-caprae (Linn.) Sweet.
Convolvulus Pes-caprae, Linn. Island of Cozumel (*Gaumer*, 1885). "Sometimes attains an hundred feet in length."

I. triloba, Linn.
Island of Cozumel (*Gaumer*, 1886).

I. sidaefolia, Linn.
Island of Cozumel (*Gaumer*, 1886).

I. coccinea, Linn.
Island of Cozumel (*Gaumer*, 1886).

I. Jalapa, (Linn.) Pursh.
In the more open woods, Mascab Pixoy, Jan. 22, 1895 (**148**).

I. Bona-nox, Linn. *Oracion.* **XUTU.**
Climbing over the highest shrubs among the ruins, Chichen Itza, Jan. 20, 1895 (**138** and **123**). In our specimens the calyx is one-eighth the length of the tube of the corolla. Island of Cozumel (*Gaumer*, 1885).

I. puncticulata, Benth.
Completely covering an old well house, base of the Cerro Grande, Izamal, Jan. 13, 1895 (**67**).

I. Jamaicensis (Spreng.) Don.
Convolvulus Jamaicensis, Spreng. Island of Cozumel (*Gaumer*, 1885 and 1886).

I. fastigiata, Sweet
Island of Cozumel (*Gaumer*, 1886). Open woods Mascab Pixoy, Jan. 22, 1895 (**147**).

JACQUEMONTIA, Choisy.

J. pentantha (Jacq.) Don. *Sombaritas azul.* **AK-IXIU.**
Convolvulus pentanthos, Jacq. *Jacquemontia violacea* (Vahl) Choisy. Island of Cozumel (*Gaumer*, 1885 and 1886), open woods near the Cenote of Ix-kil, Chichen Itza, Jan. 20, 1895 (**142**) Mascab Pixoy, Jan. 22, 1895 (**145**).

CONVOLVULUS, Linn.

C. Jamaicensis, Jacq.
Higher banks of the coast, above the clear sand beach, Progreso, Jan. 24, 1895 (**208**). The ovate-lanceolate leaved form.

CUSCUTA, Linn.

C. Americana, Linn.
On weeds in an old Milpa southern end of the Island of Cankun, Jan. 3, 1895. Island of Cozumel (*Gaumer*, 1885 and 1886).

HYDROPHYLLACEAE.

HYDROLEA, Linn.

H. glabra, Choisy.
Yucatan, loc. ignot. (*Johnson*).

NAMA, Linn.

N. Jamaicensis, Linn.
Island of Cozumel (*Gaumer*, 1886).

ASPERIFOLIACEAE.

CORDIA, Linn.

C. dodecandra, DC. *Ciricote.* **COPTÉ.**
Common in gardens. Merida, Progreso, Izamal, and San Miguel, Island of Cozumel; where it is cultivated for its edible fruit. Izamal, Jan. 13, 1895 (**74**). Yucatan, loc. ignot. (*Johnson*). Island of Cozumel (*Gaumer*, 1885).

C. Sebestana, Jacq. *Anachuita.*
Cordia speciosa, R & S. Cultivated at Dolores, Island of Mugeres, for its edible fruit and beautiful flowers. In flower Jan. 3, 1895 (**29**). Also collected here by Dr. Gaumer in 1886.

C. gerascanthoides, Kth. **HABEEM.**
Cordia gerascanthus, Sw. (non Jacq.). A beautiful tree 10 to 30 feet high, with a profusion of pinkish-white flowers. Plentiful about Izamal, especially on the road to Tepakaam, Jan. 15, 1895 (**89**) Island of Mugeres (*Gaumer*, 1886).

C. globosa (Linn.) H.B.K., var. ?
Varronia globosa, Linn. Island of Cozumel (*Gaumer*, 1885).

EHRETIA, Linn.

E. tinifolia, Linn.
Yucatan, loc. ignot. (*Grisebach*).

TOURNEFORTIA, Linn.

T. gnaphalodes (Jacq.) R. Br.
Heliotropium gnaphalodes, Jacq. The principal growth at the inner margin of all the sandy beaches of the Island of Mugeres, North Point, Jan. 1, 1895, (**12**); also collected here by Dr. Gaumer in 1886. Same position at Progreso, and the Island of Cankun.

T. volubilis, Linn.
Island of Mugeres (*Gaumer*, 1886).

HELIOTROPIUM, Linn.

H. inundatum, Sw. **NEMAX.**
Yucatan, loc. ignot. (*Johnson*). Island of Cozumel (*Gaumer*, 1885).

H. parviflorum, Linn. *Rabo de Mico.* **XNA-MAX.**
Campo about Merida, May, 1887. Campo at Chichen Itza, Jan. 18, 1895 (**117**). Yucatan, loc. ignot. (*Johnson*). Island of Cozumel (*Gaumer*, 1885).

VERBENACEAE.

LANTANA, Linn.

L. odorata, Linn.
On rocks inland a few rods from the beach sands, shrubby but kept closely cropped by herbivorous animals. North Point, Island of Mugeres, Jan. 1, 1895 (**10**). Islands of Holbox and Mugeres (*Gaumer*, 1886).

L. Camara, Linn.
Island of Cozumel (*Gaumer*, 1885).

L. involucrata, Linn.
Island of Cozumel (*Gaumer*, 1885).

BOUCHEA, Cham.

B. prismatica (Linn) O. K.
Verbena prismatica, Linn. *Bouchea Ehrenbergii*, Cham. Yucatan, loc. ignot. (*Linden*).

VALERIANODES, Boerh.

E. Jamaicense (Linn) Boerh.
Verbena Jamaicensis, Linn. *Stachytarpheta Jamaicensis*, Vahl. Island of Cozumel (*Gaumer*, 1885). Island of Mugeres (*Gaumer*, 1886).

PRIVA, Adans.

P. lappulacea, (Linn) Pers.
Verbena lappulacea Linn. *Priva echinata*, Juss. Island of Cozumel (*Gaumer*, 1885 and 1886).

PETREA, Linn.

P. volubilis, Jacq. ?
Yucatan, loc. ignot. (*Johnson*).

DURANTA, Linn.

D. repens, Linn.
Duranta Plumieri, Jacq. Island of Cozumel (*Gaumer*, 1885).

VOLKAMERIA, Linn.

V. ligustrina (R. Br.) Jacq.
Clerodendron ligustrinum, R. Br. Yucatan, loc. ignot. (*Johnson*).

LIPPIA, Linn.

L. origanioides, H. B. K.
Yucatan, loc. ignot. (*Johnson*).

L. nodiflora (Linn) Michx.
Verbena nodiflora, Linn. Island of Cozumel along the road to Cedral, Jan. 5, 1895; also at Lagoona Colombia, Jan. 7. Collected here by Dr. Gaumer in 1885, and on the Island of Holbox in 1886.

L. stoechadifolia (Linn.) H.B.K.
Verbena stoechadifolia, Linn. Island of Cozumel (*Gaumer*, 1885). "Not common."

L. ——— sp. (Hemsl.)
Island of Mugeres (*Gaumer*, 1886).

CALLICARPA, Linn.

C. acuminata, H.B.K., var.? (Hemsl.)
Island of Cozumel, (*Gaumer* 1885).

AVICENNIA, Linn.

A. officinalis, Linn.
A. tomentosa, Jacq. Island of Cozumel (*Gaumer*, 1885).

A. nitida, Jacq.
Island of Holbox (*Gaumer*, 1886).

LABIATEAE.

HYPTIS, Jacq.

H. capitata, Jacq.
Yucatan, loc. ignot. (*Johnson*).

H. pectinata, Poit.
Island of Cozumel (*Gaumer*, 1886).

CLINOPODIUM, Linn.

C. Brownei, (Sw.) O. K.
Thymus Brownei, Sw. *Micromeria Brownei*, Benth. In moist soil of a pathway, road to Cedral, Island of Cozumel, Jan. 5, 1895 (**39**). Has the odor of Pennyroyal.

Forma calyce angustiore, Hemsl.
Island of Cozumel (*Gaumer*, 1885).

SALVIA, Linn.

S. occidentalis, Sw. **CAK-NEP.**
Our specimens of the form having mucronate calyx lobes (*S. obscura*, Benth.) Streets of Dolores, Island of Mugeres, Jan. 1, 1895 (**18**). Road to Tepakaam near Izamal, Jan. 14, 1895 (**90**).
Being greatly interested in the similitude of the Maya name Kak-Nep to our Catnep, I finally, upon inquiry, traced it to derivation from a gentleman of New Orleans who visited the Island of Mugeres early in this century; he called the attention of the Indians to the plant saying that it was catnep and very useful in decoction for fever.

S. coccinea, Linn. f. **ↃIC-XIU.**
This brilliant flowered species is nowhere common, but may be met with here and there throughout the Peninsula. Cerro Grande, Izamal, Jan. 13, 1895. Campo about Chichen Itza, Jan. 18, 1895 (**116**).

S. serotina, Linn.
Island of Cozumel (*Gaumer*, 1885). Island of Mugeres (*Gaumer*, 1886).

TEUCRIUM, Linn.

T. inflatum, Sw.
Along the railroad at Tecantun, Jan. 24, 1895 (**190**), erect ½ to 2½ feet high.

SOLANACEAE.

LYCIUM, Linn.

L. ———sp. (Hemsl.)
Island of Holbox (*Gaumer*, 1886). "Near *L. barbinodum*, Miers. Hemsley."

CAPSICUM, Linn.

C. baccatum, Linn.
Island of Cozumel (*Gaumer*, 1885).

C. frutescens, Linn.
Island of Cozumel (*Gaumer*, 1886).

SOLANUM, Linn.

S. torvum, Sw.
Yucatan, loc. ignot. (*Johnson*).

S. ——— sp. (Hemsl.)
Island of Holbox (*Gaumer*, 1886).

S. Havanense, Jacq. *Yerba mora.* **BA-HA-KAN.**
This shrubby form is quite plentiful about the ruins at Chichen Itza, Jan. 18, 1895 (**120**).

S. verbascifolium, Linn. **TOM-PAAP.**
Among the rocks of the beach, South Point, Island of Mugeres, Jan. 2, 1895 (**25**). Island of Cozumel (*Gaumer*, 1885 and 1886). About the ruined Monjas, Chichen Itza, Jan. 22, 1895 (**140**).

S. nigrum, Linn., var. (Hemsl.)
Island of Cozumel (*Gaumer*, 1885). Island of Mugeres (Gaumer, 1886).

S. Amazonium, Ker.
Island of Cozumel (*Gaumer*, 1885). Along the Tepakaam road near Izamal, Jan. 15, 1895 (**98**).

S. Humboldtii, Willd. **ZUNUMBAK.**
Lycopersicum Humboldtii, Dun. Plentiful about the ruins Chichen Itza, Jan. 20, 1895 (**141**).

DATURA, Linn.

D. Stramonium, Linn. *Chamico.* **XTOHCU.**
Found only near dwellings. Island of Cozumel at Cedral. Waste grounds at Merida, and Mascab Pixoy, Jan. 22, 1895 (**146**). Island of Cozumel (*Gaumer*, 1885).

CESTRUM, Linn.

C. diurnum, Linn.?
Island of Cozumel (*Gaumer*, 1885).

SCROPHULARIACEAE.

RUSSELIA, Jacq.

R. sarmentosa, Jacq.
Island of Cozumel (*Gaumer*, 1885).

MONNIERA, P. Br.

M. Monniera (Linn.) Britton.
Gratiola Monniera, Linn. *Herpestis Monniera*, H.B.K. Island of Cozumel (*Gaumer*, 1885).

M. procumbens (Mill.)
Erinus procumbens, Mill. *Herpestis chamaedryoides*, H.B.K. Island of Cozumel (*Gaumer*, 1885).

CAPRARIA, Linn.

C. biflora, Linn.

Island of Cozumel (*Gaumer*, 1885). Islands of Mugeres and Holbox (*Gaumer*, 1886).

C. biflora pilosa, Griseb. *Clondioso.*

Campo about the ruins, Chichen Itza, Jan 18, 1895, (**118** and **119**).

My **118** agrees with the specimens collected on Fortune and Watling's Islands by Mr. A. S. Hitchcock; and my **119** with those collected by him on the Island of Inagua.

BUECHNERA, Linn.

B. Mexicana, Hemsl. **KABA-CHÉ-CHÉ-BÉ.**

Plentiful in the grass bordering the path at the base of the Great Pyramid, Chichen Itza, Jan. 17, 1895 (**104**).

BIGNONIACEAE.

BIGNONIA, Linn.

B. ——— sp. (Hemsl.)

Island of Cozumel (*Gaumer*, 1885). "Vine 10 to 30 feet; not abundant. No fruit, and only imperfect leaves." Hemsley.

B ——— sp. (Hemsl.)

Island of Cozumel (*Gaumer*, 1885). "Vine 10 to 100 feet; no fruit, and but imperfect leaves." Hemsley.

TECOMA, Linn.

T. stans (Linn.) Juss. *Flor Amarillo.* **XKANLOL.**

Bignonia stans, Linn. On the summit of the Cerro Grande Izamal, Jan. 13, 1895 (**55**), in flower and fruit. At the foot of the Great Pyramid, Chichen Itza, Jan. 18, 1895 (**124**), 6 to 8 feet high.

CRESCENTIA, Linn.

C. Cujete, Linn. *Cujete.* **LUCH.**

One specimen only of this tree observed, that at Mascab Pixoy. It was out of season both as to flower and fruit.

PARMENTIERA, DC.

P. edulis (Mocq.) DC. *Pepina.*

Cultivated ? Street in Dolores, Island of Mugeres, Jan. 2, 1895 (**30**). A small umbrageous tree 15 to 25 feet high, with a strict cylindrical trunk. Fruits 6 to 10 inches long.

PEDALIACEAE.

MARTYNIA, Linn.

M. diandra, Glox.
Martynia angulosa, Lam. Yucatan, loc. ignot. (*Johnson*).

ACANTHACEAE.

TUBIFLORA, Gm.

T. squamosa (Jacq.) O.K.
Verbena squamosa, Jacq., *Elytraria tridentata*, Vahl. Campo about Izamal, Jan. 23, 1895 (**188**).

RUELLIA, Linn.

R. paniculata, Linn. **KABAUCHÉ, ɔAKALBAK.**
A low straggling shrub. On the slopes of the Cerro Grande Izamal, Jan. 13, 1885 (**57**). Margin of the scrub along the Tepakaam road near Izamal, Jan. 14, 1895 (**93**). Campo about the ruins Chichen Itza, Jan. 17, 1895 (**105** and **139**).
The Maya ɔakalbak is applied to all Ruellias of this form, the word Kabauché meaning really nothing more distinctive than "a small bush."

BLECHUM, P. Br.

B. Brownei, Juss.
Campo about Izamal, Jan. 23, 1895 (**171**).

B. Brownei *var.* (Hemsl.)
Island of Cozumel (*Gaumer* 1885).

BRAVAISIA, DC.

B. tubiflora, Hemsl.
Type locality, Island of Cozumel (*Gaumer* 52, 1885); "Tree 25 feet; not abundant." Higher banks of sea shore Progreso, Jan. 26, 1895 (**206**). Low shrub, flowers white with a tinge of purple, lower lip purple, throat yellow, buds yellowish white.

APHELANDRA, R. Br.

A. pectinata, Nees.
Shrub 15 feet high. Tepakaam road near Izamal, Jan. 14, 1895 (**91**).

DIAPEDIUM, Koenig.

D. assurgens (Linn). O.K.
Justicia assurgens, Linn. *Dicliptra assurgens* Juss. Yucatan loc. ignot. (*Johnson.*) Island of Cozumel (*Gaumer*, 1885 and 1886).

DIANTHERA, Gronov.

D. comata, Linn.
Yucatan loc. ignot. (*Johnson*).

TETRAMERIUM, Nees.

T. hispidum, Nees.
Edges of Copses, Chal-tun-ha road near Izamal, Jan. 14, 1895 (**78**).

T. costatum (Gray).
Henrya costata Gray. Among the rocks on the Cerro Grande Izamal, Jan. 13, 1895 (**65**).

DIANTHERA, Gronov.

D. sessilis, Griseb.
In the scrub along the Chal-tun-ha road near Izamal, Jan. 14, 1895 (**79**).

PLANTAGINACEAE.

PLANTAGO, Linn.

P. major, Linn.
Island of Cozumel (*Gaumer*, 1885).

RUBIACEAE.

RACHICALLIS, DC.

R. Americana (Jacq.) O. K.
Hedysotis Americana, Jacq. *Rachicallis rupestris* (Sw.) DC.
Island of Cozumel (*Gaumer*, 1885).

RONDELETIA, Linn.

R. stenosiphon, Hemsl.
Yucatan, loc. ignot. (*Johnson*).

COUTAREA, Aubl.

C. octomera, Hemsl.
Type locality, Island of Cozumel (*Gaumer*, 1885). "Very rare shrub, flowers greenish-yellow."

RANDIA, Linn.

R. aculeata, Linn.
Island of Cozumel (*Gaumer*, 1885).

R. latifolia, Linn.
Island of Cozumel (*Gaumer*, 1885).

R. ? longiloba, Hemsl.
Type locality, Island of Cozumel (*Gaumer*, 1885). "Tree 25 feet; very common and very aromatic."

HAMELIA, Jacq.

H. patens, Jacq. **XKAN-NAN.**

Shrub 6 to 8 feet high, growing upon the lower terrace of the ruined Monjas, Chichen Itza, Jan. 1895 (**122**). Island of Cozumel (*Gaumer*, 1885 and 1886).

H. chrysantha, Sw.

Along the roadside near Cedral, Island or Cozumel, Jan. 5, 1895 (**41**).

GUETTARDA, Linn.

G. scabra (Linn,) Lam.

Mathiola scabra, Linn. Yucatan, loc. ignot. (*Linden*).

MACHAONIA, Humb. & Bonpl.

M. Lindeniana, Baill.

Yucatan, type loc. ignot. (*Linden*).

ERITHALIS, P. Br.

E. fruticosa, Linn.

A low shrub, 4 to 5 feet high, forming a part of the general littoral growth at the margin of the sandy beach, North Point, Island of Mugeres, Jan. 2, 1895 (**27**). Islands of Holbox and Mugeres (*Gaumer*, 1886).

CHIOCOCCA, P. Br.

C. racemosa, Jacq.

Island of Cozumel (*Gaumer*, 1885), "varietates." Hemsl.

ASEMNANTHA, Hook f.

A. pubescens, Hook f.

Humid forests, loc. ignot. (*Linden*).

STRUMPFIA, Jacq.

S. maritima, Jacq.

Island of Mugeres, on the higher reef rocks almost in constant spray, Jan. 1, 1895 (**11**). Collected here also by Dr. Gaumer in 1886.

A low, spreading, shrubby growth resembling a Juniper or a frutescent Erica. This species seems to have reached this Island from the Bahamas without, as far as I can learn, finding a foothold upon any of the intervening islands.

COUSSAREA, Aubl.

C. speciosa, Aubl. ?

Yucatan, loc. ignot. (*Linden*).

MORINDA, Linn.

M. Royoc, Linn.

Island of Cozumel (*Gaumer*, 1885). "A littoral bush 1 to 3 feet; abundant."

ERNODEA, Sw.

E. littoralis, Sw.

On the higher beach above the clear beach sands, Progreso, Jan. 26, 1895 (**207**).

Shrubby. Flower tube deep brownish-lake externally, white within corolla, teeth sharply recurved.

Island of Cozumel (*Gaumer*, 1885). "Bush 1 to 3 feet; abundant" Islands of Holbox and Mugeres (*Gaumer*, 1886).

BORRERIA, G. F. W. Mey.

B. thymifolia, Griseb.

On the Cerro Grande, Izamal, Jan. 13, 1895 (**63**).

SPERMACOCE, Linn.

S. laevis, Lam.

Yucatan, loc. ignot. (*Johnson*).

S. verticillata, Sw.

Island of Holbox (*Gaumer*, 1886).

S. teunior, Lam (not Linn.)

Campo at Izamal, Jan 23, 1895 (**183**). Island of Cozumel (*Gaumer*, 1885 and 1886).

S. Haenkeana, Hemsl. *Flor de Manzanillo do Campo.*

Campo about the ruins, Chichen Itza, Jan. 17, 1895 (**113**). My specimens agree with Pringle's 2453 from Jalisco, except that the glomerules of mine are somewhat smaller.

The Mayas claim that this form has severe ptarmacoid properties.

TRIODON, DC

T. angulatum, Benth.

Yucatan, loc. ignot. (*Johnson*).

CAPRIFOLIACEAE.

SAMBUCUS, Linn.

S. Mexicana, Presl.

About the ruins at the southern end of the Island of Cankun, Jan. 3, 1895, not in bloom. Island of Cozumel (*Gaumer*, 1885).

CUCURBITACEAE.

MELOTHRIA, Linn.

M. pendula, Linn. **XTULU.**

About the ruined Monjas, Chichen Itza, Jan. 17, 1895 (**109** and **110**). Very young but in flower.

The Maya name Xtulu "Little Watermelon" is applied to various cucurbits.

SICYDIUM, Schlecht.

S. tamnifolium, (Poir.) Cogn.

At Tiop, (*Linden*). Yucatan, loc. ignot. (*Schott.*)

S. ——— sp.? (Hemsl.)

Island of Cozumel (*Gaumer*, 1885). "Vine 15 feet; rare. Foliage and male flowers only." Hemsley.

MOMORDICA, Linn.

M. Charantia, Linn.

Island of Cozumel (*Gaumer*, 1885).

LUFFA, Linn.

L. cylindrica (Linn.) Roem.

Momordica cylindrica, Linn. Yucatan, loc. ignot. (*Schott*).

CAYAPONIA, Manso.

C. alata, Cogn.

Type locality, the Hacienda Sara-Grossa (Schott).

C. grandiflora, Cogn.

Type locality, Picul (*Schott*).

CAMPANULACEAE.

ISOTOMA, Lindl.

I. longiflora (Linn.) Presl.

Lobelia longiflora, Linn. Island of Cozumel (*Gaumer*, 1885). "Not common."

GOODENIACEAE.

SCAEVOLA, Linn.

S. Plumieri (Linn.) Vahl.

Lobelia Plumieri, Linn. Islands of Holbox and Mugeres (*Gaumer*, 1886).

COMPOSITAE.*

VERNONIA, Schreb.

V. lanceolaris, DC.

Yucatan, loc. ignot. (*Johnson*).

V. Schiedeana, Less.

Yucatan, loc. ignot. (*Johnson*).

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* My numbers were kindly determined by Professor J. M. Coulter.

OLIGANTHES, Cass.

O. oxylepis, Benth & Hook.
Yucatan, loc. ignot. (*Johnson*).

ALOMIA, H.B.K.

A. ageratoides, H.B.K. ?
Ethulia ageratoides, Spreng. Island of Cozumel (*Gaumer*, 1885). "Differs from the next species only in having white flowers and epappose achenes." Hemsley.

AGERATUM, Linn.

A. intermedium, Hemsl.
Type locality, Island of Cozumel (*Gaumer*, 1885). "Abundant."

A. corymbosum, Zucc.
Campo about Izamal, Jan. 13, 1895, (**72**).

EUPATORIUM, Linn.

E. odoratum, Linn.
Yucatan, loc. ignot. (*Johnson*).

E. ——— sp. (Hemsley).
Island of Cozumel (*Gaumer*, 1885). "Rare, flowers white tinged with dull yellow."
Professor Hemsley says: "This agrees with a specimen from Yucatan and Tabasco (Torrey 1850) together with which it may be or may not be an undescribed species." The Yucatan and Tabasco species is doubtless one of the Johnson collection, as Professor Torrey contributed that collection to Kew.

E. populifolium, H.B.K.
Yucatan, loc. ignot. (*Johnson*).

E. paniculatum, Schrad.
Island of Cozumel (*Gaumer*, 1886).

E. ——— sp. (Hemsl.)
Island of Cozumel (*Gaumer*, 1886), "Near E. conyzoides, Vahl."

E. conyzoides, Vahl.
Campo about the ruins, Chichen Itza, Jan. 17, 1895 (**115**).

WILLOUGHBIA, Neck.

W. Houstonis (Linn.) O.K.
Eupatorium Houstonis, Linn. *Mikania Houstonis*, Willd. Yucatan, loc. ignot. (*Johnson*).

CHRYSOPSIS, Nutt.

C. ——— sp.
Roadside near Izamal, Jan. 15, 1895 (**97**). Three feet high, nearly out of flower.

EGLETES, Less.

E. viscosa, Less.
Yucatan, loc. ignot. (*Johnson*).

AMELLUS, P. Br.

A. aspera (Jacq.) O.K.
Calea aspera, Jacq. *Melanthera deltoidea*, Michx. Island of Cozumel (*Gaumer*, 1886).

A. niveus (Linn.) O.K.
Bidens nivea, Linn. *Melanthera hastata*, Rich. On the beach near the Lagoona Colombia, Island of Cozumel, Jan. 7, 1895 (**51**). Island of Cozumel (*Gaumer*, 1885). Yucatan, loc. ignot. (*Johnson*).

ERIGERON, Linn.

E. Canadensis, Linn.
Island of Cozumel (*Gaumer*, 1885).

PLUCHEA, Cass.

P. purpurascens (Sw.) DC.
Conyza purpurascens, Sw. Island of Cozumel (*Gaumer*, 1885).

P. odorata (Linn.) Cass.
Conyza odorata, Linn. Streets of Izamal, Jan. 23, 1895 (**176**). Island of Mugeres (*Gaumer*, 1886).

PARTHENIUM, Linn.

P. Hysterophorus, Linn.
Island of Cozumel (*Gaumer*, 1885 and 1886).

AMBROSIA, Linn.

A. hispida, Pursh.
Ambrosia crithmifolia, DC. Sea shore, Island of Cozumel (*Gaumer*, 1885). "Very Abundant."

BLAINVILLEA, Cass.

B. dichotoma (Murr.) Cass.
Verbesina dichotoma, Murr. Island of Cozumel (*Gaumer*, 1886).

BORRICHIA, Adans.

B. arborescens (Linn). DC.
Buphthalmium arborescens, Linn. Sea shore, Island of Cozumel (*Gaumer*, 1885). "Bushy, 3 feet; abundant." Islands of Mugeres and Holbox (*Gaumer*, 1886).

WEDELIA, Jacq.

W. trilobata (Linn.) Hitch.
Silphium trilobatum, Linn. *Wedelia carnosa*, Pers. Island of Cozumel (*Gaumer*, 1885).

ASPILIA, Thou.

A. ——— sp.
Old clearing near Mascab Pixoy, Jan. 22, 1895 (**154**).

VIGUIERA, Less.

V. helianthoides, H.B.K.
Island of Cozumel (*Gaumer*, 1886).

ELEUTHERANTHERA, Poit.

E. divaricata (Rich.)
Dysodium divaricatum, Rich. *Melampodium divaricatum*, DC. Patio residence of Dr. Gaumer, Izamal, Jan. 13, 1895 (**71**). Island of Cozumel (*Gaumer*, 1885 and 1886).

SPILANTHES, Jacq.

S. repens (Walt.) Michx.
Anthemis repens, Walt. Island of Cozumel, marshy places (*Gaumer*, 1885 and 1886). "Not abundant."

S. beccabunga, DC.
Moist soil of pathway to Cedral, Island of Cozumel, Jan. 5, 1895 (**43**).

HELIANTHELLA, T. & G.

H. ——— sp. **TAH.**
Plentiful in the clearing at the base of the Great Pyramid, Chichen Itza, Jan. 17, 1895 (**103**), 4 to 6 feet high, flowers bright King's yellow.

ZEXMENIA, Llav. & Lex.

Z. trachylepes, Hemsl.
Yucatan, type loc. ignot. (*Johnson*).

SYNEDRELLA, Gaertn.

S. nodiflora, Gaertn.
Campo about Izamal, Jan. 23, 1895 (**185**).

BIDENS, Linn.

B. pilosa, Linn.
Island of Cozumel (*Gaumer*, 1885).

B. Alansensis, H.B.K.
Compo about Izamal, Jan. 23, 1895 (**170**).

CALEA, Linn.

C. ——— sp.
Old clearing near Mascab Pixoy, Jan. 22, 1895 (**153**).

TRIDAX, Linn.

T. procumbens, Linn.
Campo about Izamal, Jan. 23, 1895 (**218**). Yucatan, loc. ignot. (*Linden*). Island of Cozumel (*Gaumer*, 1885).

FLAVERIA, Juss.

F. linearis, Lag.
Island of Cozumel (*Gaumer*, 1885).

F. longifolia, A. Gray.
Island of Holbox (*Gaumer*, 1886).

TAGETES, Linn.

T. tenuifolia, Cav.
Campo about Izamal, Jan. 23, 1895 (**179**).

NEUROLAENA, R. Br.

N. lobata (Linn.) R. Br.
Conyza lobata, Linn. Yucatan, loc. ignot. (*Johnson*).

TRIXIS, P. Br.

T. radialis (Linn.) O.K.
Perdicium radialis, Linn. *Trixis Inula*, Crantz, *Trixis frutescens* R. Br. Apex of the Cerro Grande, Izamal, Jan. 13, 1895 (**56**).

ORDERS.	Genera.	Species.	Mainland.	Insular Species.				Dr. Gaumer.	Author.	Johnson.	Linden.	Schott.
				Cozumel.	Mugeres.	Holbox.	Cankun.					
Acanthaceæ	9	11	10	3	..	..	..	3	8	2	..	..
Amaranthaceæ	6	8	5	2	1	1	..	4	4	1	..	..
Amaryllidaceæ	1	1	1	1	..	..	..	1	..	1	..	..
Anacardiaceæ	3	4	1	4	..	..	..	3	1	1	..	..
Anonaceæ	1	3	2	1	..	..	..	1	2	..	..	..
Apocynaceæ	5	8	4	2	1	..	..	4	2	2	..	..
Araceæ	1	1	1	..	..	..	..	..	1	..	..	..
Aristolochiaceæ	1	1	1	..	..	..	..	..	1	..	..	..
Asclepiadaceæ	6	7	5	2	1	1	..	3	2	..	3	..
Asperifoliaceæ	4	9	6	4	4	..	1	7	5	2	..	..
Bignoniaceæ	4	5	2	2	1	..	..	2	3	..	..	..
Bixaceæ	3	3	3	..	..	..	..	..	2	1	..	..
Bombacaceæ	3	5	5	..	..	..	..	..	4	1	..	..
Bromeliaceæ	5	8	6	1	..	1	..	1	2	3	..	3
Burseraceæ	1	1	1	1	1	..	..	..	1	..	..	..
Cactaceæ	2	4	1	2	3	..	..	1	3	..	..	..
Campanulaceæ	1	1	..	1	..	..	..	1	..	..	..	..
Cannaceæ	1	1	..	1	..	..	..	1	..	..	..	..
Capparidaceæ	2	2	2	..	..	..	..	..	1	..	1	..
Caprifoliaceæ	1	1	..	1	..	..	1	1	1	..	..	..
Caricaceæ	2	2	2	1	1	..	1	1	2	..	..	..
Casuarinaceæ	1	1	1	1	1	..	1	..	1	..	..	..
Celastraceæ	2	2	..	1	1	..	..	2	..	..	..	..
Chenopodiaceæ	2	2	..	..	..	2	..	2	..	..	..	..
Combretaceæ	2	2	..	2	..	1	..	2	..	..	..	..
Commelynaceæ	2	3	1	2	1	..	..	2	..	..	..	1
Compositæ	30	42	24	21	2	2	..	22	15	11	..	..
Convolvulaceæ	5	13	7	9	..	..	1	9	7	1	..	..
Crassulaceæ	1	1	1	..	..	..	..	..	1	..	..	..
Cruciferæ	1	1	1	1	1	..	..	1	1	..	..	..
Cucurbitaceæ	5	7	5	1	..	..	..	2	1	..	1	4
Cycadaceæ	1	1	1	..	..	..	..	..	..	..	..	..
Cyperaceæ	2	6	1	3	2	1	..	4	1	..	..	1
Dioscoreaceæ	1	2	1	1	..	..	..	1	..	..	1	..
Euphorbiaceæ	6	22	13	13	5	2	1	11	15	..	1	..
Filices	8	9	4	5	..	..	..	3	6	..	..	..
Gentianaceæ	1	1	..	1	..	1	..	1	..	..	..	..
Goodeniaceæ	1	1	..	..	1	1	..	1	..	..	..	..
Gramineæ	8	11	5	4	1	4	..	5	5	..	1	..
Guttiferæ	1	1	..	1	..	..	..	1	..	..	..	..
Hepaticæ	3	4	2	2	..	..	..	..	4	..	..	..
Hippocrateaceæ	1	1	..	1	..	.	..	1	..	..	..	..
Hydrophyllaceæ	2	2	1	1	..	..	..	1	..	1	..	..
Iridaceæ	1	1	1	..	..	..	..	..	..	..	1	..
Labiateæ	4	7	4	3	2	.	..	3	4	1	..	..
Lauraceæ	3	3	1	1	..	1	..	2	1	..	..	..
Leguminosæ	32	58	31	30	9	..	..	33	18	13	4	..
Liliaceæ	2	2	2	..	..	..	..	..	..	..	..	2
Loasaceæ	1	1	1	..	..	..	..	..	1	..	..	..
Lythraceæ	1	1	1	1	..	..	..	1	..	1	..	..
Malpighiaceæ	5	8	5	3	..	..	..	3	..	4	.1	..
Malvaceæ	6	10	8	2	..	..	..	2	7	1	..	..
Melastomaceæ	3	3	3	..	..	..	..	..	..	3	..	..
Meliaceæ	3	4	2	2	..	..	..	2	1	..	1	..
Moraceæ	2	4	4	1	1	..	..	..	4	..	..	..
Musaceæ	1	2	2	2	1	..	2	..	2	..	..	..

ORDERS.	Genera.	Species.	Mainland.	Insular Species.				Dr. Gaumer.	Author.	Johnson.	Linden.	Schott.
				Cozumel.	Mugeres.	Holbox.	Cankun.					
Musci	3	3	2	2	..	..	..	..	3	..	..	..
Myrsinaceæ	2	3	1	2	..	1	..	2	..	1	..	..
Myrtaceæ	3	3	2	1	..	..	..	2	2	..	..	..
Nyctaginaceæ	2	3	3	1	..	..	..	1	3	..	..	..
Nymphaceæ	2	2	2	..	..	..	..	..	1	..	1	..
Orchidaceæ	1	1	1	..	..	..	..	..	1	..	..	..
Palmeæ	3	4	2	3	4	..	3	2	3	..	..	..
Pandaneæ	1	2	2	..	..	..	..	..	2	..	..	..
Papaveraceæ	1	1	1	1	..	..	..	1	1	..	..	..
Passifloraceæ	1	2	..	2	1	..	..	2	..	..	..	..
Pedaliaceæ	1	1	1	..	..	..	..	..	..	1	..	..
Phytolaccaceæ	2	5	3	2	2	..	..	2	1	2	1	..
Piperaceæ	1	1	1	..	..	..	..	..	..	..	1	..
Plantaginaceæ	1	1	..	1	..	..	..	1	..	..	..	..
Plumbaginaceæ	1	1	1	..	..	..	..	..	1	..	..	..
Polygalaceæ	1	1	1	..	..	..	..	..	..	1	..	..
Polygonaceæ	2	3	..	3	1	..	..	3	1	..	..	..
Ranunculaceæ	1	3	3	1	..	..	..	1	1	1	..	1
Rhamnaceæ	1	1	1	..	..	..	..	..	..	..	1	..
Rhizophoraceæ	1	1	..	1	..	1	1	1	1	..	..	..
Rubiaceæ	17	23	12	11	3	3	..	14	8	3	4	..
Rutaceæ	6	9	4	4	2	..	..	4	5	..	..	..
Sapindaceæ	5	7	5	2	..	..	..	2	2	3	1	..
Sapotaceæ	3	3	2	1	1	..	..	1	2	..	..	..
Scrophulariaceæ	4	6	2	4	1	1	..	4	2	..	..	..
Simarubaceæ	2	2	1	1	1	1	..	2	1	..	..	..
Smilaceæ	1	1	..	1	..	..	..	1	..	..	..	..
Solanaceæ	5	12	5	7	2	2	..	9	5	1	..	..
Sterculiaceæ	6	7	5	4	..	..	..	3	3	2	1	..
Tiliaceæ	1	2	2	..	..	..	..	..	..	2	..	..
Urticaceæ	1	1	1	..	..	..	..	..	..	1	..	..
Verbenaceæ	10	16	4	9	3	3	..	12	2	3	1	..
Violaceæ	1	1	1	..	..	..	..	..	..	1	..	..
Vitaceæ	1	2	1	1	..	..	..	1	..	1	..	..
Zygophyllaceæ	1	2	1	1	..	..	..	1	1	..	..	..
Totals: Orders, 91	307	471	264	210	62	30	12	224	192	75	25	12

SUMMARY.

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PUBLICATIONS OF THE MUSEUM.

The series of publications of the Field Columbian Museum, of which this is a number, began with "An Historical and Descriptive Account of the Field Columbian Museum." The numbers that succeed in the series are not restricted either in authorship or subject, if coming within the scope of scientific or technical discussion, and contributive to the high standard it is hoped the publications will maintain. The series includes transactions, memoirs, monographs, bulletins, handbooks, and catalogues of collections.

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PUBLICATIONS ISSUED:

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